1 Port ADSL2+Router
User Manual

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1. Introduction

The ADSL access device supports multiple line modes. It provides one 10/100Base-T Ethernet interface at the user end. Utilizing the high-speed ADSL connection, the device provide users with broadband connectivity to the Internet or the Intranet for high-end users as net bars, office users, etc. can provide a downlink speed up to 24 Mbit/s and uplink speed up to 1 Mbit/s.

1.1 Package List

- One single port router
- One external splitter
- One power adapter
- Two pieces of telephone lines(RJ-11,more than 1m)
- One piece of Ethernet cable(RJ-45, more than 1.5m)
- One copy of User's Manual
- A centificate of quality
- One copy of driver and utility software CD(optional)

1.2 Safety Cautions

Follow these announcements below to pretect the device from risks and damage caused by fire or electric power.

- Use volume labels to mark the type of power.
- Use the power adapter packed within the device package.
- Pay attention to the power load of the outlet or prolonged lines. An overburden power outlet or damaged lines and plugs may cause electric shock or fire accident. Check the power cords regularly. If you find any damage, replace it at once.
- Proper space left for heat radiation is necessary to avoid any damage caused by overheating to the device. The long and thin holes on the Access Point are designed for heat radiation to make sure the device works normally. Don't cover these heat radiant holes.
- Do not put this device close to a place where a heat source exits or high temperature occurs. Avoid the device from direct sunshine.
- Do not put this device close to a place where is over damp or watery. Do not spill any fluid on this device.
- Do not connect this device to any PC or electronic product, unless our customer engineer or your broadband provider instructs you to do this, because any wrong connection may cause any power or fire risk.
- Do not place this device on an unstable surface or support.

1.3 LED and Interface Description

Front panel

Fig 1.3-1 Front panel

LED	Color	Status	Descriptions
POWER	Green/Red	OFF	No power
		GREEN	Device init OK
		RED	Device init
		RED BLINK	Fireware upgrade
Link	Green	OFF	Initial self-test failed
		BLINK	Device is detecting itself
		ON	Initial self-test of the unit is OK and ready
Data	Green	OFF	Internet connection failed
		BLINK	Internet data transiting
		ON	Internet connection OK
Ethernet	Green	OFF	No LAN link
		BLINK	LAN data transiting
		ON	LAN link established and active

Rear panel

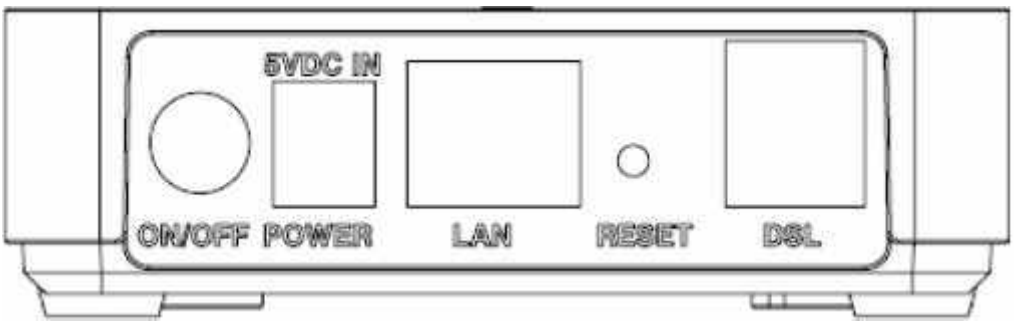

Fig 1.3-2 Rear panel

Items	Usage
DSL	Line RJ-11 port

Items	Usage
Reset	Resets to factory defaults. To restore factory defaults, keep the device powered on and push a paper clip in to the hole. Press down the button over 5 seconds and then release.
Ethernet	Ethernet RJ-45 port
⏻	Power On/Off.
PWR	Power connector. DC 10 Voltage/1000mA,female pole is positive.

1.4 System Requirements

Make sure first that you have prepared these following items to guarantee the ROUTER can work normally.

- Services subscriptions
- An 10BaseT/100BaseT Ethernet card installed on your PC
- HUB or Switch. (Attached to several PCs through one of Ethernet interfaces on the device)
- Operation system: Windows 98SE, Windows 2000, Windows ME, or Windows XP
- Internet Explorer V5.0 or higher, or Netscape V4.0 or higher, or firefox 1.5 or higher.

1.5 Feature

- Supports various line modes
- Supports external PPPoE dial-up access
- Supports internal PPPoE/PPPoA dial-up access
- Supports leased line mode
- Supports ZIPB (Zero Installation PPP Bridge Mode)
- Supports 1483B/1483R/MER access
- Supports multiple PVCs(eight at most) and these PVCs can be isolated from each other
- Support a single PVC with multiple sessions
- Support multiple PVCs with multiple sessions
- Supports the binding of the ports and the PVCs
- Supports the 802.1Q and 802.1P protocol
- Supports DHCP server
- Supports NAT/NAPT
- Supports static route
- Supports firmware upgrade：WEB/tftp/ftp
- Supports reset to factory default:reset, WEB
- Supports DNS relay
- Supports Virtual server
- Supports DMZ functions
- Supports two-grade passwords and usernames
- Supports WEB interface
- Supports telnet CLI
- Supports System status display

- Supports PPP session PAP/CHAP
- Supports IP filter function
- Supports remote access control
- Supports line connection status test
- Supports remote management（Telnet; HTTP）
- Supports configuration file backup and restoration function
- Ethernet supported such as Crossover Detection & Auto-Correction and polarity correction
- Supports UPnP

1.6 FCC Compliance

This equipment has been tested and found to comply with the limits for Class digital devices pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communication.

Operation of this equipment in residential area is likely to cause harmful interference in which case the user will be required to correct the interference at this own expense.

The user should not modify or change this equipment without written approval from company name. Modification could void authority to use this equipment.

For the safety reason, people should not work in a situation which RF Exposure limits be exceeded. To prevent the situation happening, people who work with the antenna should be aware of the following rules:

1. Install the antenna in a location where a distance of 20cm from the antenna may be maintained.

2. While installing the antenna in the location, please do not turn on the power of wireless card.

3. While the device is working, please do not contact the antenna.

1.7 Supporting Protocols

ITU G.992.1 (G.DMT) Annex A

- ITU G.992.2 (G.LITE)
- ANSI T1.413 Issue 2
- ITU G.992.3 (ADSL2)
- ITU G.992.5 (ADSL2+)

2. Hardware Installation

1、Refer to the figure below: Connect the DSL port of the device and the ROUTER port of the splitter with a telephone cable; connect the phone to the Phone port of the splitter through a cable; connect the incoming line to the Line port of the splitter.

The splitter has three ports：

LINE: Connects to a wall phone jack (RJ-11 jack)

ROUTER: Connects to the DSL jack of the device

PHONE: Connects to a telephone set

2、Connect the LAN port of the device to the network card of the PC via an Ethernet line (MDI/MDIX).

Note: Use twisted-pair cables to connect with the HUB/Switch.

3、Plug the power adapter to the wall outlet and then connect the other end of it to the PWR port of the device.

Connection 1: Fig. 2-1 displays the application diagram for the connection of the Router, PC, splitter and telephone set。

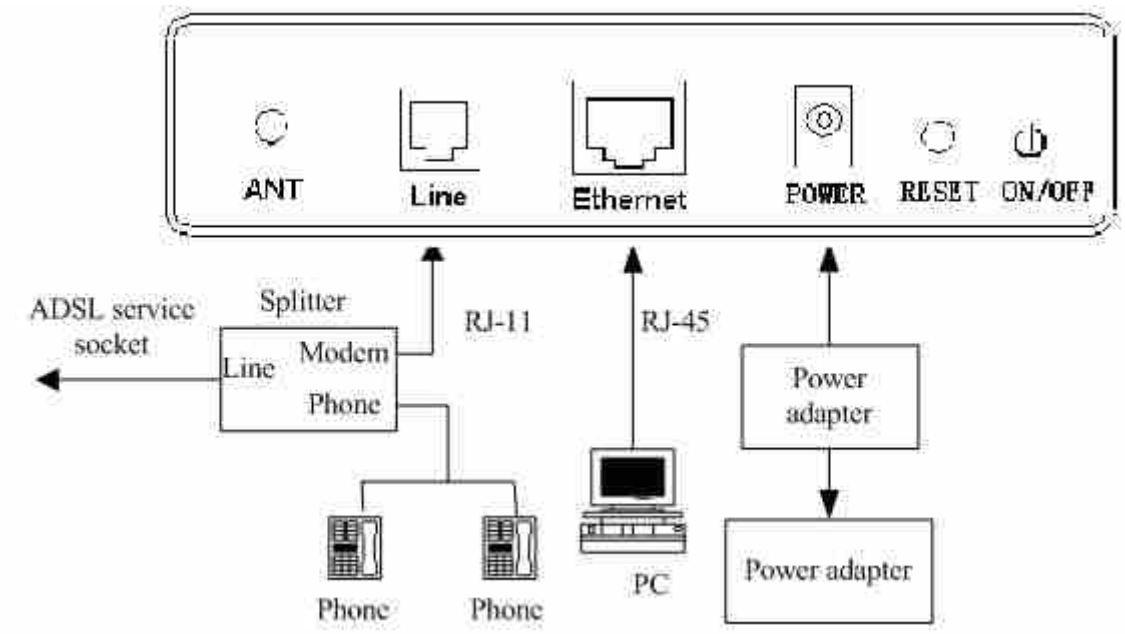

Fig 2-1 Connection Diagram（Without connecting telephone sets before the splitter）

Connection 2：As illustrated in the following figure, the splitter is installed close to the device.

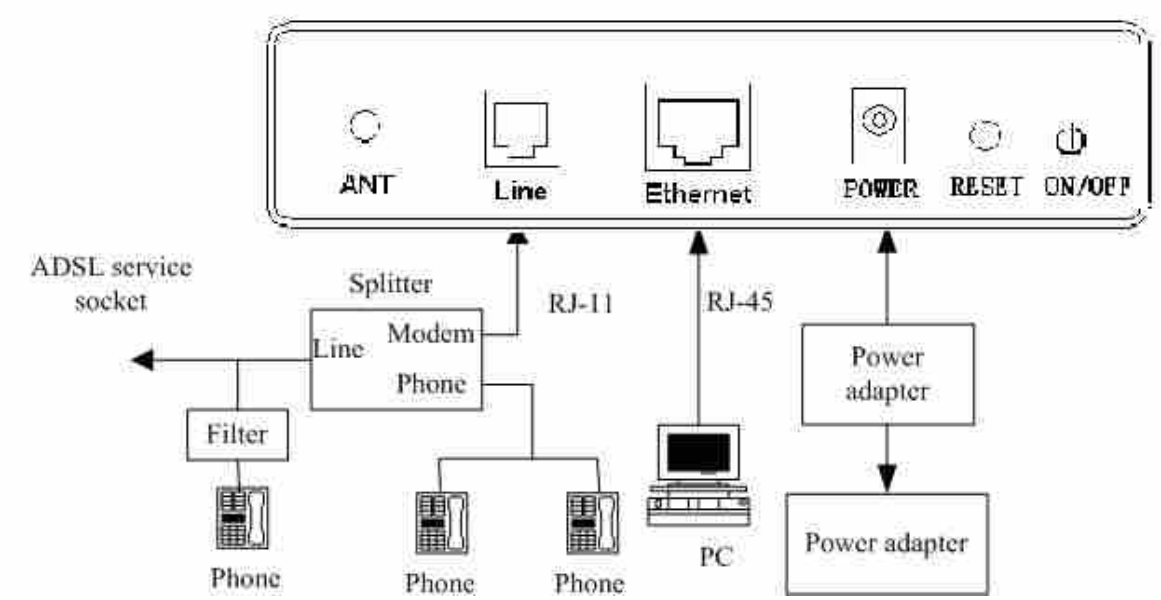

Fig 2-2 Connection Diagram（Connecting a telephone set before the splitter）

- It is **recommended** to follow the Connection 1 in an actual connection!
- **Note:** When Connection 2 is used, the filter must be installed close to the telephone lines. (See Fig. 2-2. Do not use the splitter instead of the filter).

Installing a telephone directly before the splitter may lead to a failure of connection between the device and the device of LAN side, or cannot access into the Internet, or slow the connection speed if you really need to add a telephone set before the splitter, you have to add a MicroFilter before connecting to a telephone set. Do not connect several telephones before the splitter. Moreover, do not connect several telephones with MicroFilters.

3. Introducing Web Configuration

3.1 How to access Router

The following introductions are prepared for the first time users, it is a detail “How-To” user guide.

1、 Open IE browser，then enter http://192.168.1.1 in address bar.

2、 You are required to enter user name and password. See the Fig 3.2-1.

- The super user name and password is admin/admin
- The common user name and password is user/user

Fig 3.1-1

3、 If you enter as super user, the below screen will be displayed when you enter successfully.

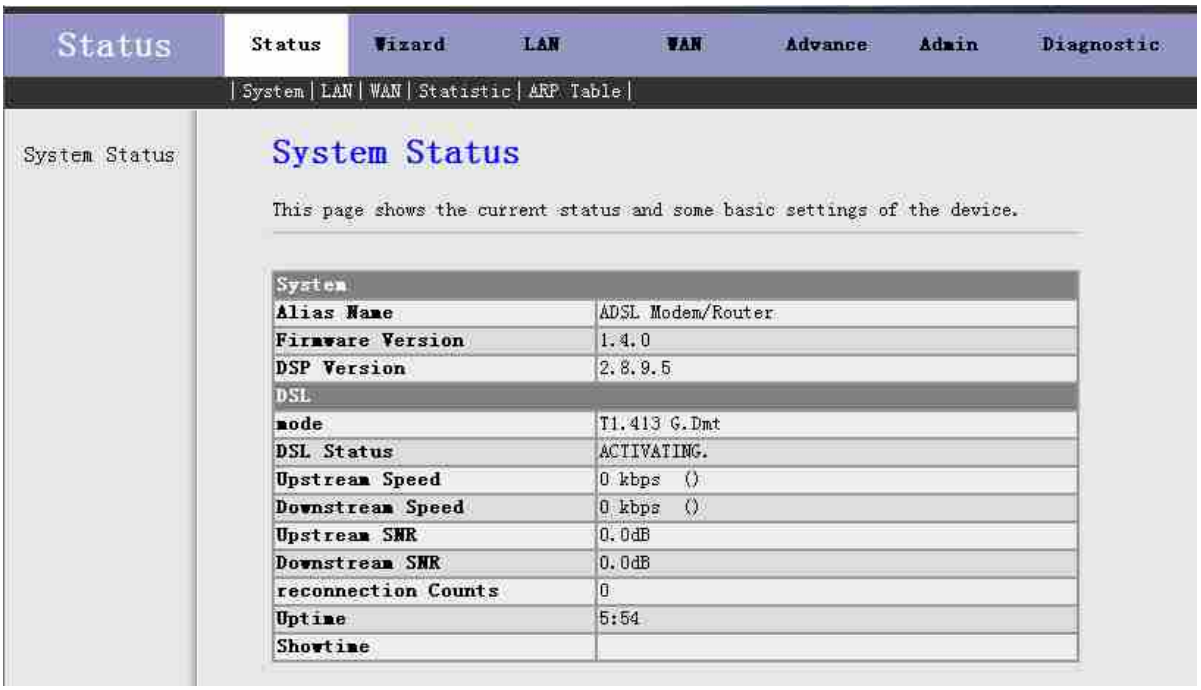

Fig 3.1-2

After you enter router as super user, you can check, config and modify all the options. You can use the system diagnostic function also.

If you enter as common user, you can check the status of ROUTER, but can't change the most of options.

3.2 Status

Click **Status** in the menu to open the sub-menu which contains 5 items: **System**, **LAN**, **WAN**, **Statistic** and **ARP Table**.

3.2.1 System

Click **System** in the sub-menu to open the screen of Fig 3.2.1. In this page, you can view the current status and some basic settings of this router, for example, Software Version, DSL mode, Upstream Speed, Downstream Speed, Uptime and so on.

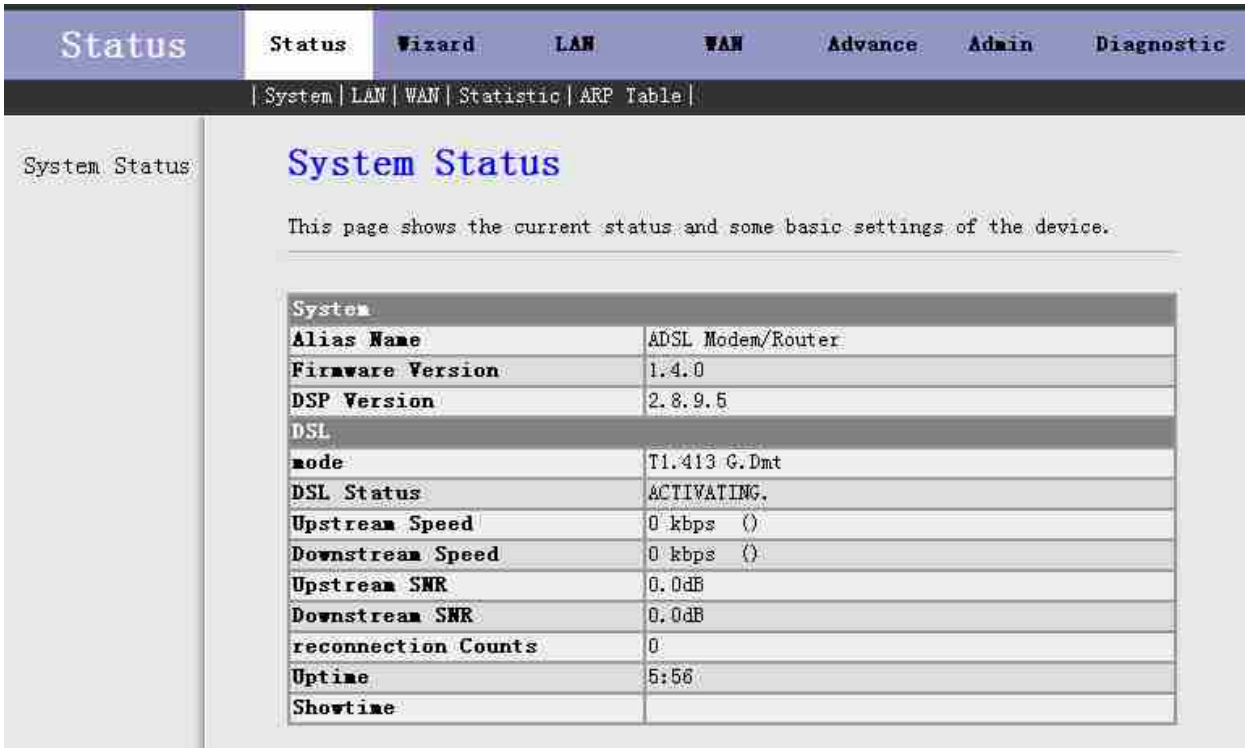

Fig 3.2.1

3.2.2 LAN

Click **LAN** in the sub-menu to open the screen of Fig 3.2.2. In this page, you can view the LAN IP, DHCP Server status, MAC Address and DHCP Client Table. If you want to config the LAN network, refer to chapter 3.4.1 “LAN Settings”.

Fig 3.2.2

3.2.3 WAN

Click **WAN** in the sub-menu to open the screen of Fig 3.2.3. In this page, you can view basic status of WAN, Default Gateway, DNS Server, ect. . If you want to config the WAN network, refer to chapter 3.5.1 “WAN Interface”.

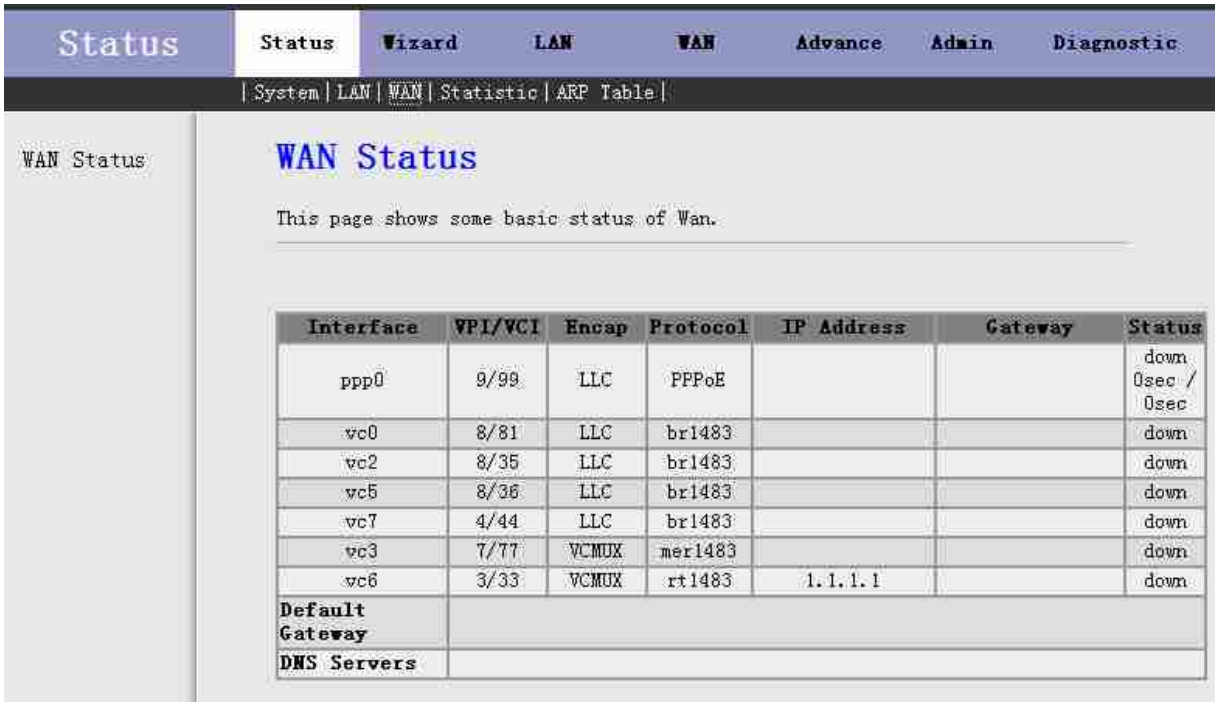

Fig 3.2.3

3.2.4 Statistic

Click **Statistic** in the sub-menu to open the menu in the left bar, whick contains two items:**Traffic Statistic** and **DSL Statistic**.

3.2.4.1 Traffic Statistic

Click **Traffic Statistic** in the left bar to open the screen of Fig 3.2.4.1. In this page, you can view the statistics of each network port.

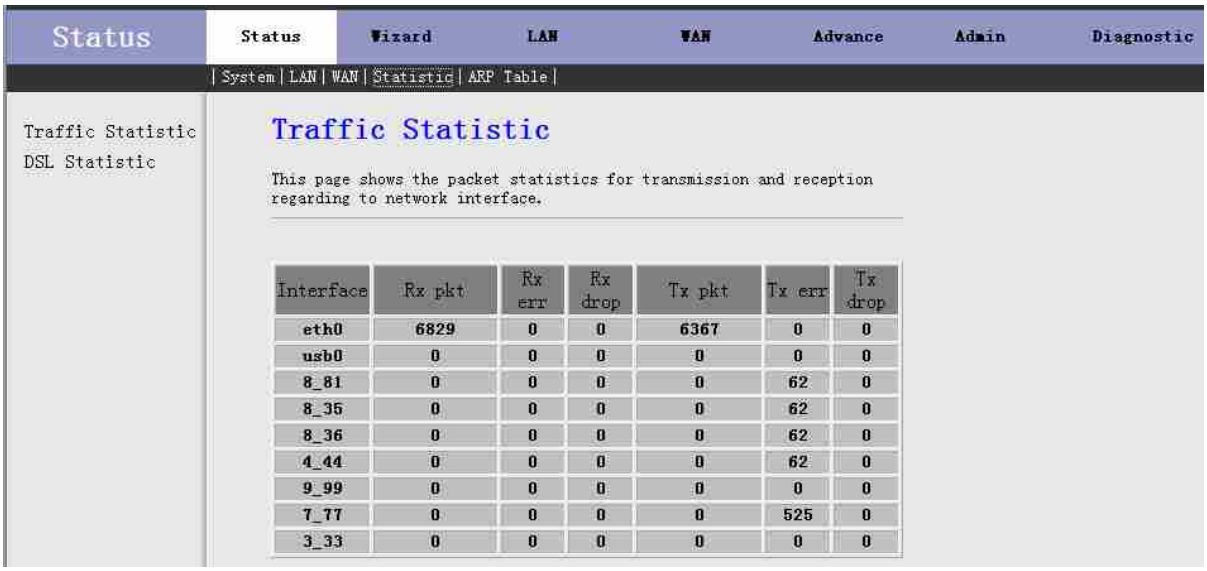
Status
Status
Wizard
LAN
WAN
Advance
Admin
Diagnostic
| System | LAN | WAN | Statistic | ARP Table |
Traffic Statistic
DSL Statistic
Traffic Statistic
This page shows the packet statistics for transmission and reception regarding to network interface.
Interface Rx pkt Rx err Rx drop Tx pkt Tx err Tx drop
eth0 6829 0 0 6367 0 0
usb0 0 0 0 0 0 0
8_81 0 0 0 0 62 0
8_35 0 0 0 0 62 0
8_36 0 0 0 0 62 0
4_44 0 0 0 0 62 0
9_99 0 0 0 0 0 0
7_77 0 0 0 0 525 0
3_33 0 0 0 0 0 0

Fig 3.2.4.1

3.2.4.2 DSL Statistic

Click **DSL Statistic** in the left bar to open the screen of Fig 3.2.4.2. In this page, you can view the ADSL line statistics, downstream rate, upstream rate, ect. .

Fig 3.2.4.2

3.2.5 ARP Table

Click **ARP Table** in the sub-menu to open the screen of Fig 3.2.5. In this page, you can view the talbe which shows a list of learned MAC addresses.

Fig 3.2.5

3.3 Wizard

Click **Wizard** in the menu to open the sub-menu which contains one item: **Wizard**.

3.3.1 Wizard

Wizard enables speedy and accurate configuration of your Internet connection and other important parameters. The following sections describe these various configuration parameters. Whether you configure these parameters or use the default ones, click 'Next' to enable your Internet connection.
When subscribing to a broadband service, you should be aware of the method by which you are connected to the Internet. Your physical WAN device can be either Ethernet, DSL, or both. Technical information regarding the properties of your Internet connection should be provided by your Internet Service Provider (ISP). For example, your ISP should inform you whether you are connected to the Internet using a static or dynamic IP address, or what protocols, such as PPPOA or PPPoE, you will be using to communicate over the Internet.

Click **Wizard** in the sub-menu to open the screen of Fig 3.3.1-1. In this page, you can config the VPI/VCI number.

Wizard
Status
Wizard
LAN
WAN
Advance
Admin
Diagnostic
| Wizard |
Wizard
Wizard
This Wizard will guide you through the steps necessary to configure your DSL Router.
Note:This PVC will instead of the first original PVC.
ATM PVC Configuration
The Virtual Path Identifier (VPI) and Virtual Channel Identifier (VCI) are needed for setting up the ATM PVC.
Do not change VPI and VCI numbers unless your ISP instructs you otherwise.
VPI: 0 (0-255)
VCI: 35 (1-65535)
Next>

Fig 3.3.1-1

Be sure to use the correct Virtual Path Identifier(VPI) and Virtual Channel Identifier(VCI) numbers assigned to you. The valid range for VPI is 0 to 255 and for VCI is 1 to 65535.

Then press **Next**, the Fig 3.3.1-2 screen will appear. In this page, you can select the WAN Connect Type and the encapsulation method.

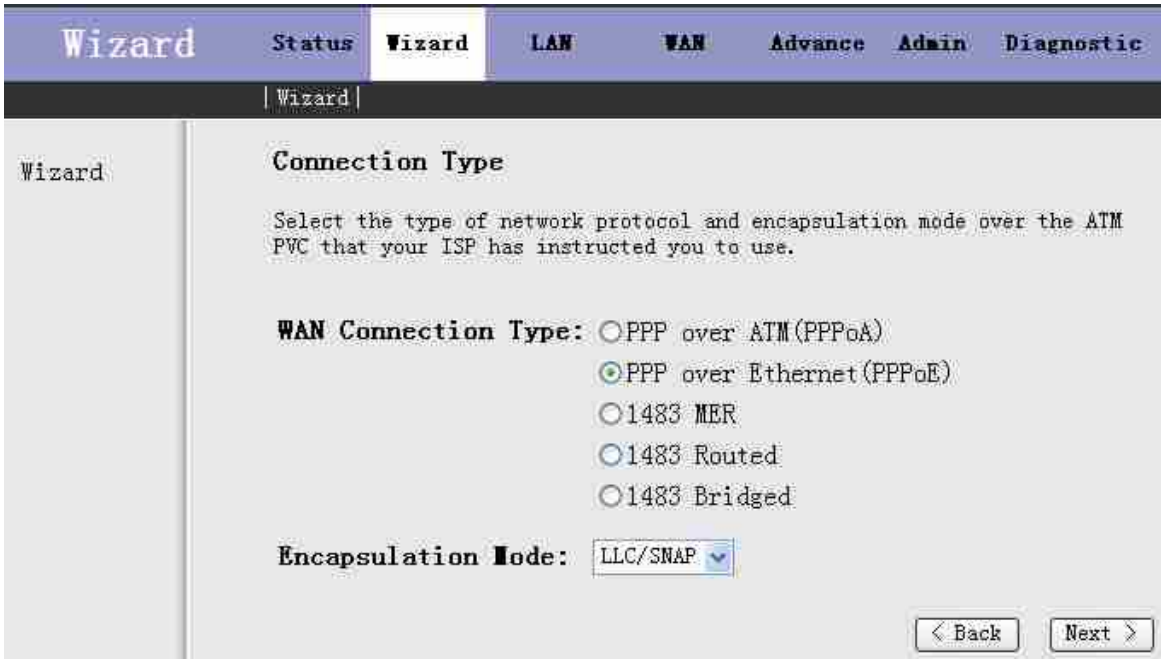

Fig 3.3.1-2

The following table describes the fields in this screen.

Label	Description
WAN Connection Type	Select the WAN Connection Type here, you can select **PPPoA**, **PPPoE**, **1483 MER**, **1483 Routed** or **1483 Bridged**.
Encapsulation Mode	Select the method of encapsulation used by your ISP from the drop-down list box. Choises are **LLC/SNAP** or **VC-Mux**.
< Back	Click **< Back** to return to the previous screen
Next >	Click **Next >** to go to the next screen

If you select PPPoA or PPPoE in WAN Connection Type, click **Next**, the screen of Fig 3.3.1-3 appears as shown next.

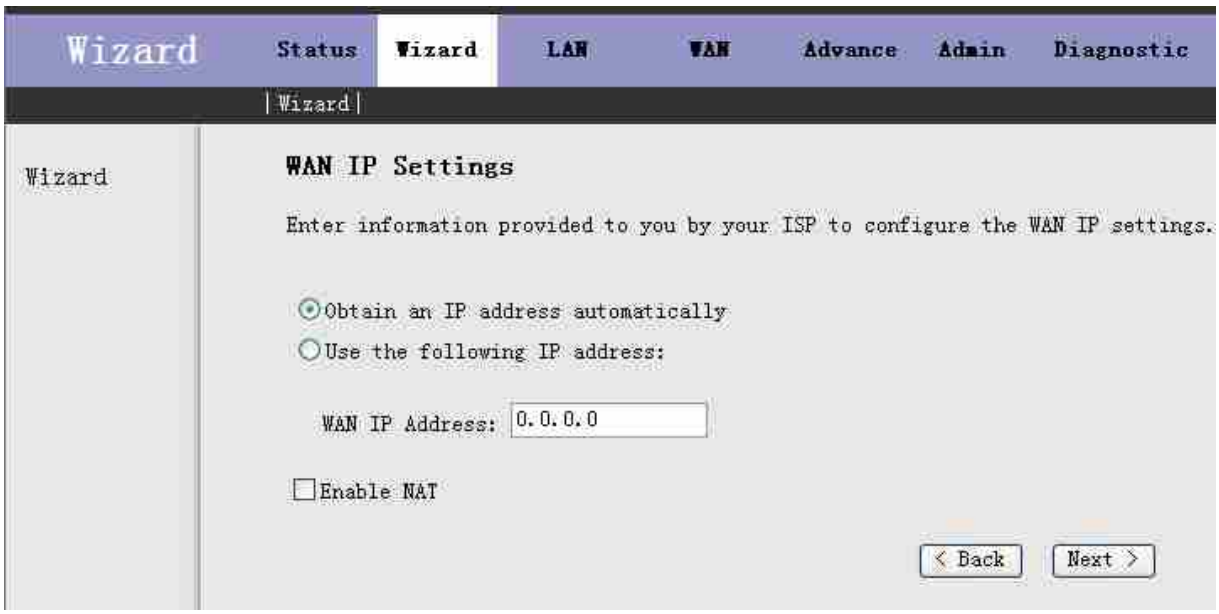

Fig 3.3.1-3

The following table describes the fields of this screen.

Label	Description
Obtain an IP address automatically	The dynamic IP is not fixed; your ISP assigns you the different one each time.
Use the following IP address	A static IP is a fixed IP that your ISP gives you.
WAN IP Address	Input the IP address of the WAN interface provided by your ISP
Enable NAT	Select it to enable the NAT functions of the MODEM. If you are not to enable NAT and intend the user of the MODEM to access the Internet normally, you must add a route on the uplink equipment; otherwise the access to the Internet will fail. Normally, it is required to enable NAT.
< Back	Click **< Back** to return to the previous screen
Next >	Click **Next >** to go to the next screen

Then click **Next**, the screen of Fig3.3.1-4 appears as shown next.

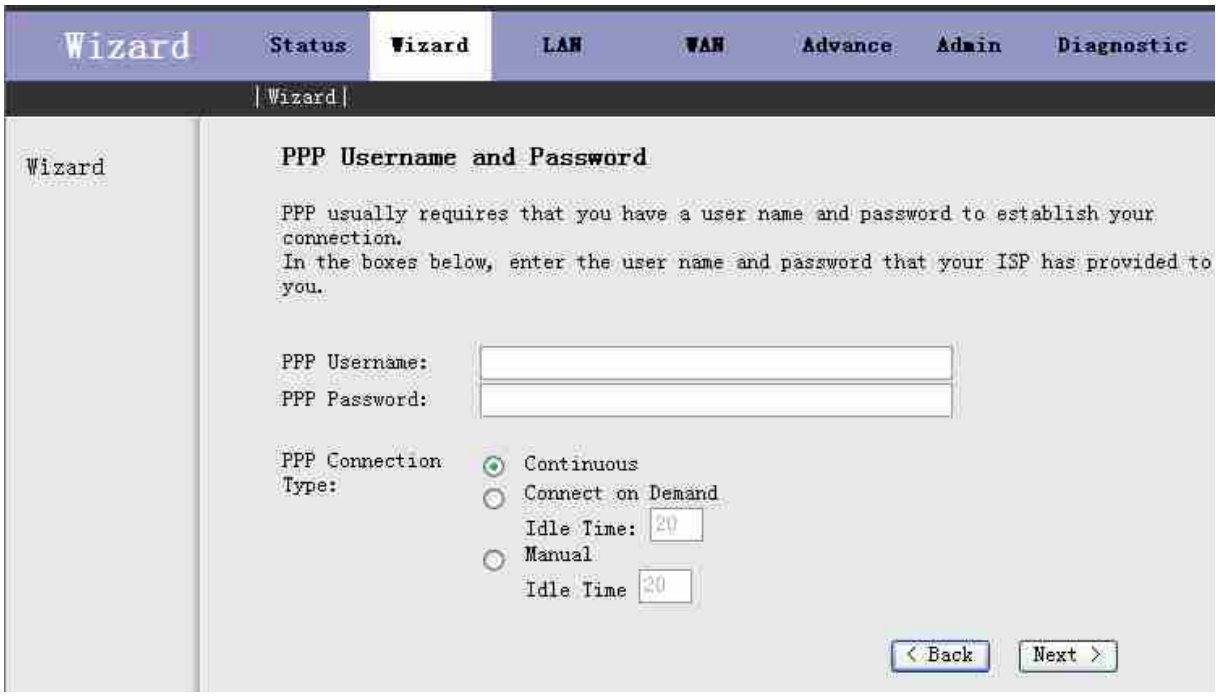

Fig 3.3.1-4

The following table describes the fields of this screen.

Label	Description
PPP Username	The username and password apply to PPPoE and PPPoA encapsulation only. Make sure that you have entered the correct username and password.
PPP Password	
PPP Connection Type	Choices are **Continuous**, **Connect on Demand** and **Manual**.
< Back	Click **< Back** to return to the previous screen
Next >	Click **Next >** to go to the next screen

Then click Next, the screen of Fig3.3.1-5 appears as shown next.

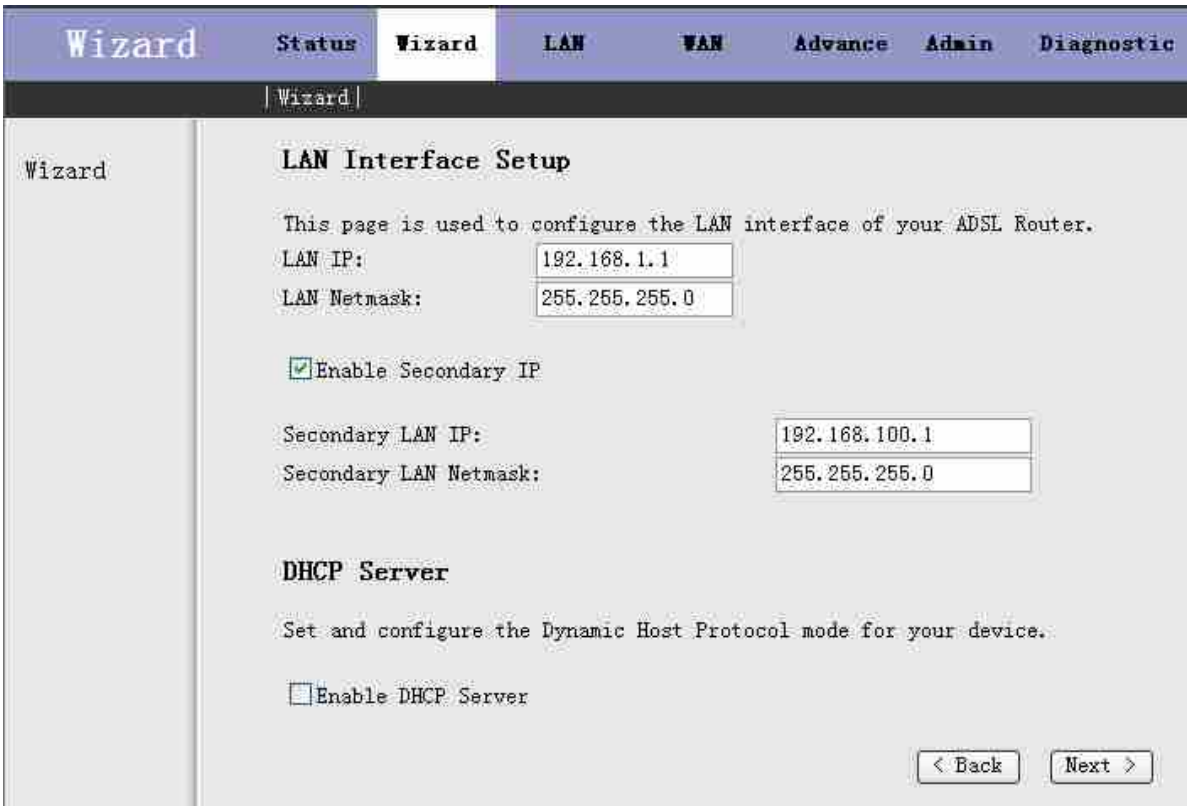

Fig 3.3.1-5

The following table describes the fields of this screen.

Label	Description
LAN IP	Enter the IP address of your ROUTER in dotted decimal notation, for example, 192.168.1.1(factory default)
LAN Netmask	Type the subnet mask of LAN IP.
Enable Secondary IP	Select this check box to enable the secondary LAN IP
Secondary LAN IP	Enter the secondary IP address of your ROUTER in dotted decimal notation, for example, 192.168.100.1(factory default)
Secondary LAN Netmask	Type the subnet mask of the secondary LAN IP
Enable DHCP Server	Select this check box to enable the DHCP Server
Start IP	This field specifies the first of the contiguous addresses in the IP address pool.
End IP	This field specifies the last of the contiguous addresses in the IP address pool.
< Back	Click **< Back** to return to the previous screen
Next >	Click **Next >** to go to the next screen

If you finish the settings of this page, click **Next**, the screen appears as shown next.

Fig 3.3.1-7

If you select 1483 MER in Fig 3.3.1-2, the screen appears as shown next.

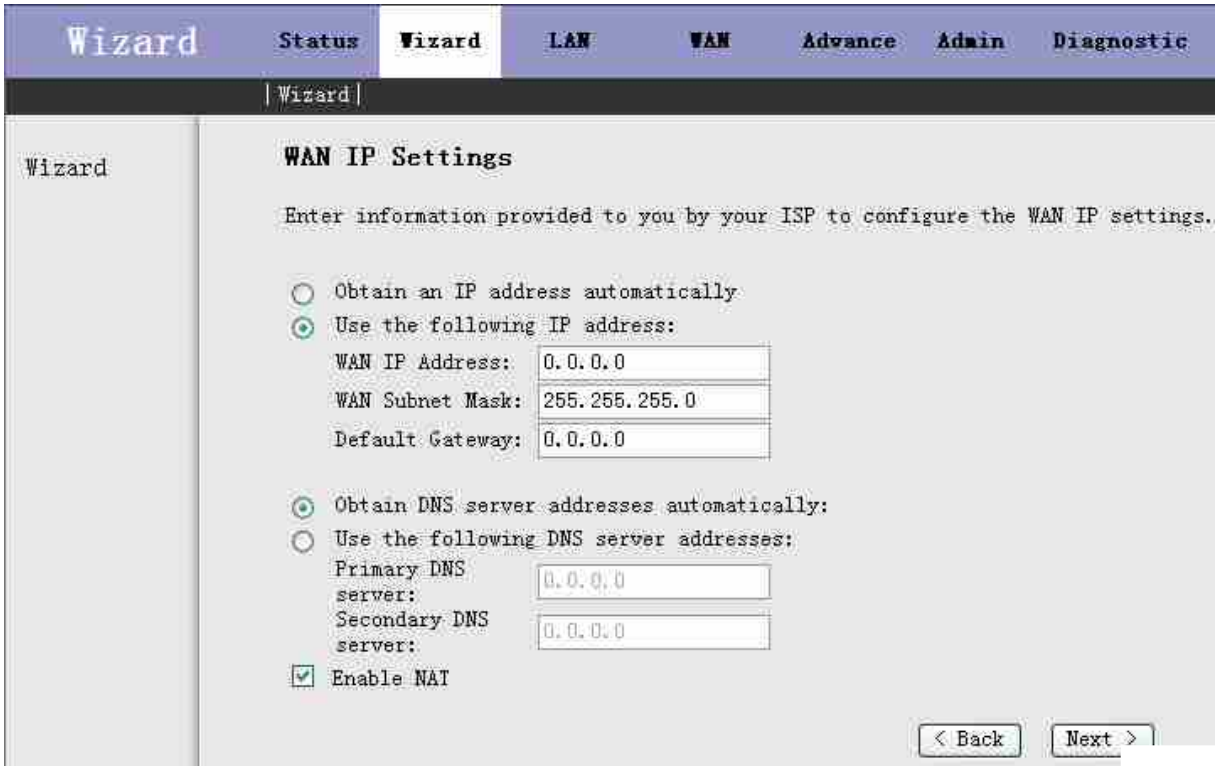

Fig 3.3.1-8

The following table describes the fields of this screen.

Label	Description
Obtain an IP address automatically	The MODEM will obtain a (WAN) IP address automatically and at this time it will enable DHCP Client functions. The WAN IP address is obtained from the uplink equipment like BAS and the uplink equipment is required to enable the DHCP Server functions.
Use the following IP address	If you want to input the WAN ip address by yourself. Check this entry and then input related data in the field.
WAN IP Address	Input the IP address of the WAN interface provided by your ISP
WAN Subnet Mask	Input the subnet mask concerned to the IP address of the WAN interface provided by your ISP.
Default Gateway	You can input the IP address of the default gateway by yourself, click this entry and then input related data in the fields.
Obtain DNS server addresses automatically	To obtain the IP address of the DNS server assigned by the uplink equipment such as BAS.
Use the following DNS server addresses	If you want to input the IP address of the DNS server by yourself, click this entry and then input related data in the fields.
Primary DNS server	Input the IP address of the primary DNS server here.
Secondary DNS server	Input the IP address of the secondary DNS server provided by your ISP here.
Enable NAT	Select it to enable the NAT functions of the MODEM. If you are not to enable NAT and intend the user of the MODEM to access the Internet normally, you must add a route on the uplink equipment; otherwise the access to the Internet will fail. Normally, it is required to enable NAT.
< Back	Click **< Back** to return to the previous screen
Next >	Click **Next >** to go to the next screen

If you finish the settings of this page, click Next, the screen of Fig 3.3.1-6 appears. The settings of this screen, see above paragraphs.

If you select 1483 Routed in Fig 3.3.1-2, the screen of Fig 3.3.1-9 appears as shown next.

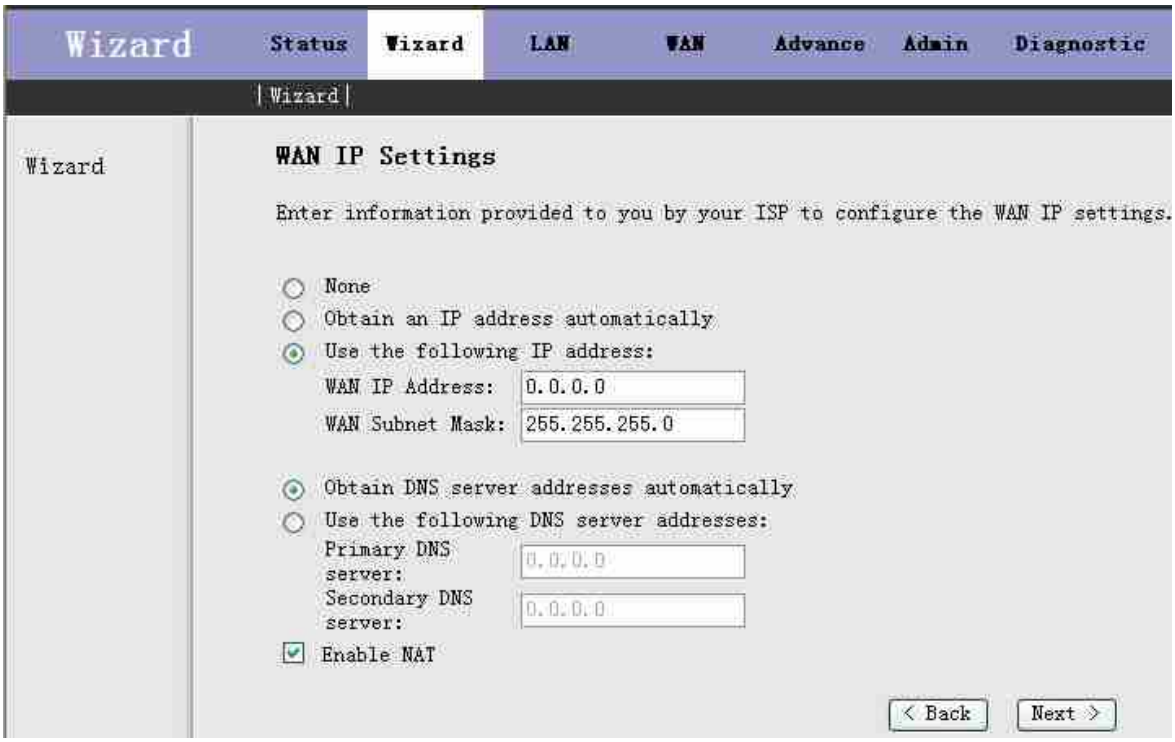

Fig 3.3.1-9

The following table describes the fields of this screen.

Label	Description
None	
Obtain an IP address automatically	The dynamic IP is not fixed; your ISP assigns you the different one each time.
Use the following IP address	A static IP is a fixed IP that your ISP gives you.
WAN IP Address	Input the IP address of the WAN interface provided by your ISP
WAN Subnet Mask	Input the subnet mask concerned to the IP address of the WAN interface provided by your ISP.
Obtain DNS server addresses automatically	To obtain the IP address of the DNS server assigned by the uplink equipment such as BAS.
Use the following DNS server addresses	If you want to input the IP address of the DNS server by yourself, click this entry and then input related data in the fields.
Primary DNS server	Input the IP address of the primary DNS server here.
Secondary DNS server	Input the IP address of the secondary DNS server provided by your ISP here.
Enable NAT	Select it to enable the NAT functions of the MODEM. If you are not to enable NAT and intend the user of the MODEM to access the Internet normally, you must add a route on the uplink equipment; otherwise the access to the Internet will fail. Normally, it is required to enable NAT.
< Back	Click **< Back** to return to the previous screen
Next >	Click **Next >** to go to the next screen

3.4 LAN

Click **LAN** in the menu to open the sub-menu which contains 2 items: **LAN Settings** and **DHCP Settings**. You can use the LAN configuration to define an IP address for the DSL Router and configure the DHCP server.

3.4.1 LAN Settings

On this screen you can change the device's IP address. The preset IP address is 192.168.1.1. This is the Private IP address of the DSL Router. This is the address under which the device can be reached in the local network. It can be freely assigned from the block of available addresses.

Click **LAN Settings** in the sub-menu to open the screen of Fig 3.4.1. In this page you can config the LAN network.

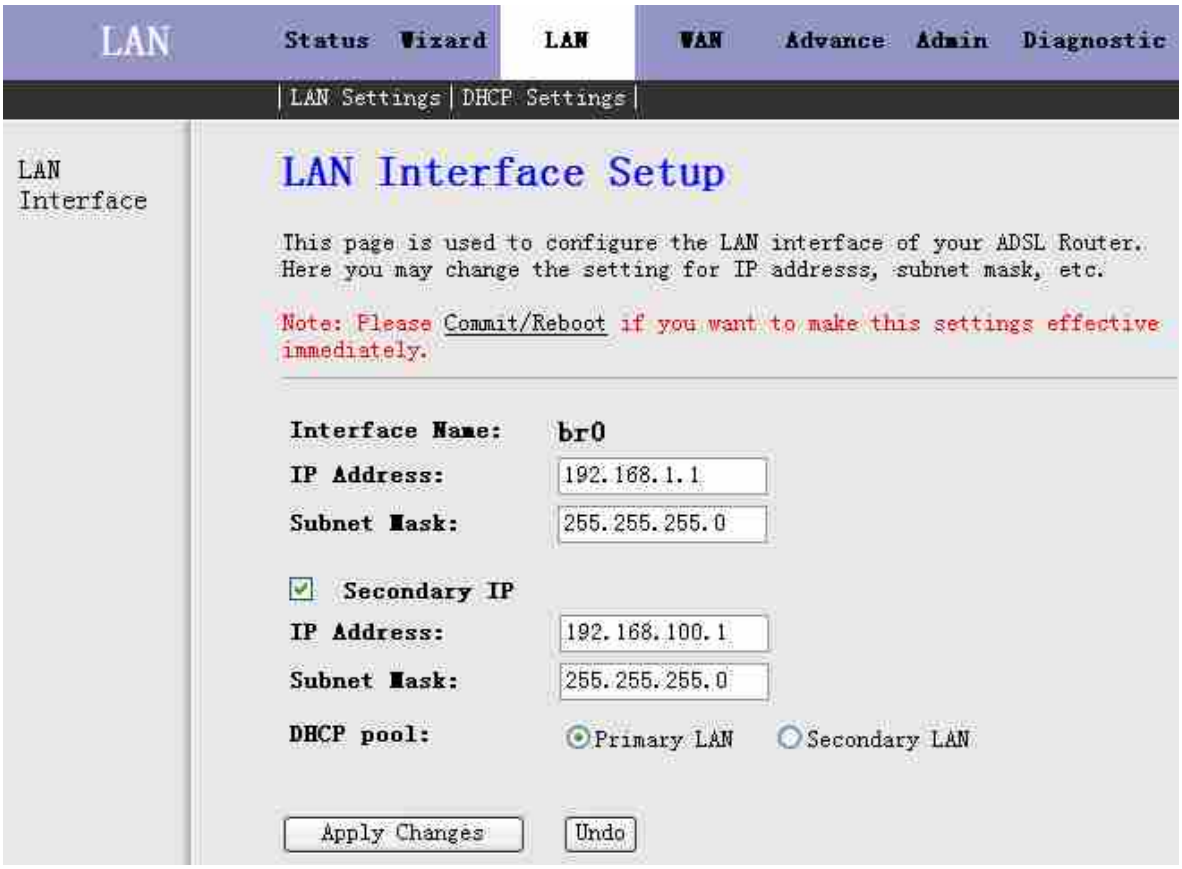

Fig 3.4.1

The following table describes the fields of this screen.

Label	Description
IP Address	Input the IP of Local area network interface here.
Subnet Mask	We recommend that you use an address from a block that is reserve private use. This address block is 192.168.1.1- 192.168.255.254

Secondary IP	Select this checkbox to enable the secondary LAN IP. The two LAN IP must be in the different network.
Apply Changes	Click this button to save the settings of this page.

3.4.2 DHCP Settings

DHCP(Dynamic Host Configuration Protocol) allows the individual client(computers) to obain the TCP/IP configuration at start-up from the centralize DHCP server. You can configure this router as a DHCP server or disable it. DHCP server can assign IP address, an IP default gateway and DNS server to DHCP clients. This router can also act as a surrogate DHCP server(DHCP Proxy) where it relays IP address assignment from a actual real DHCP server to clients.

If the DHCP was disabled, the screen of Fig 3.4.2-1 appears. You can enable/disable DHCP Server or DHCP Proxy.

Fig 3.4.2-1

If you set to DHCP Proxy, the screen of Fig 3.4.2-2 appears.

Fig 3.4.2-2

The following table describes the fields of this screen.

Label	Description
DHCP Proxy	If set to DHCP Proxy, your ROUTER acts a surrogate DHCP Server and relays the DHCP requests and reponses between the remote server and the client.
DHCP Server Address	Enter the IP address of the actual, remote DHCP server in this field.
Apply Changes	Click this button to save the changes of this page.

If you set to DHCP Server, the screen of Fig3.4.2-3 appears as shown next.

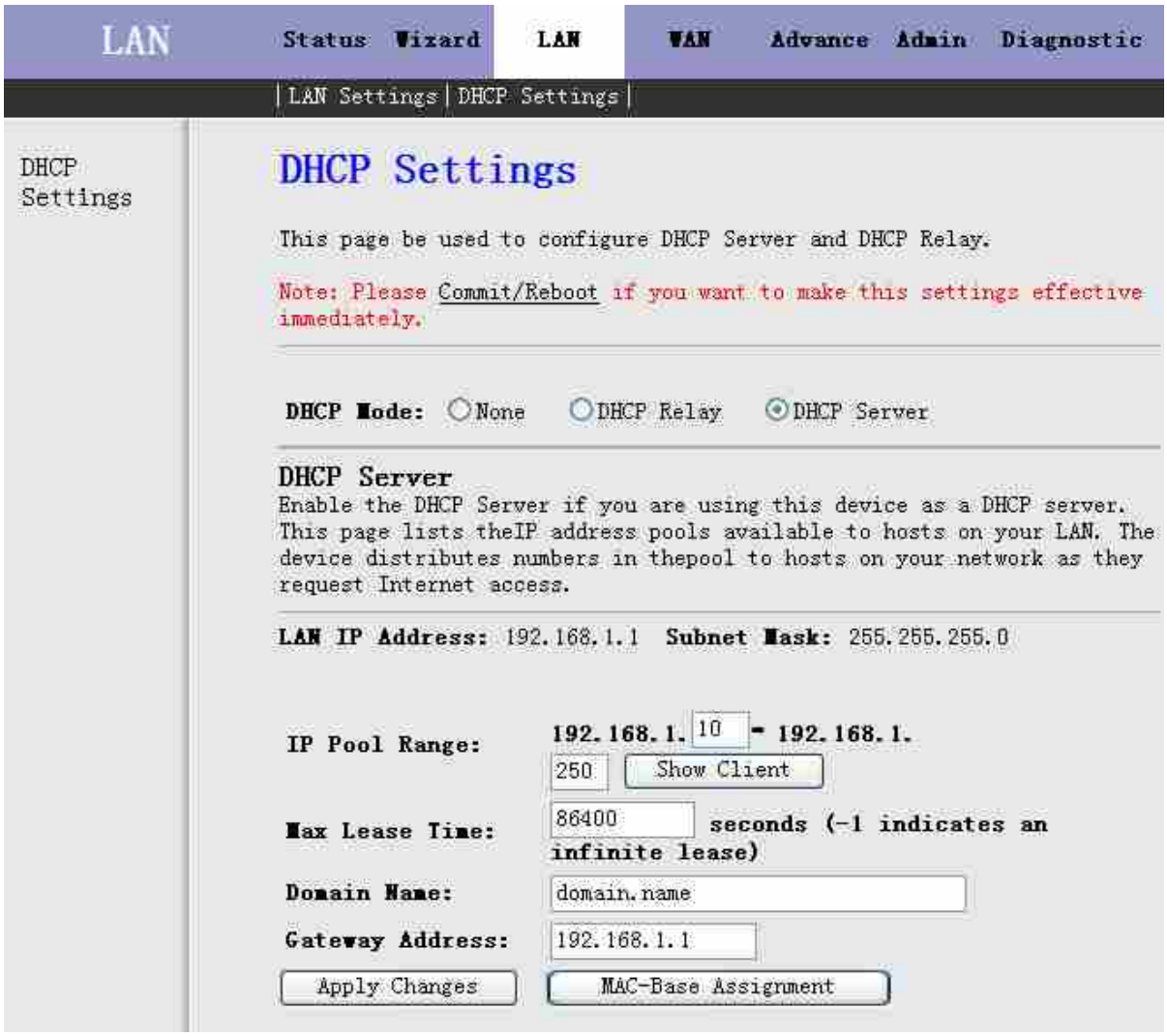
LAN
Status
Wizard
LAN
WAN
Advance
Admin
Diagnostic
LAN Settings
DHCP Settings
DHCP Settings
DHCP Settings
This page be used to configure DHCP Server and DHCP Relay.
Note: Please Commit/Reboot if you want to make this settings effective immediately.
DHCP Mode: None DHCP Relay DHCP Server
DHCP Server
Enable the DHCP Server if you are using this device as a DHCP server. This page lists theIP address pools available to hosts on your LAN. The device distributes numbers in thepool to hosts on your network as they request Internet access.
LAN IP Address: 192.168.1.1 Subnet Mask: 255.255.255.0
IP Pool Range:
192.168.1. 10 - 192.168.1.
250
Show Client
Max Lease Time:
86400
seconds (-1 indicates an infinite lease)
Domain Name:
domain.name
Gateway Address:
192.168.1.1
Apply Changes
MAC-Base Assignment

Fig 3.4.2-3

The following table describes the fields in this screen.

Label	Description
DHCP Server	If set to DHCP Server, your ROUTER can assign IP addresses, an IP default gateway and DNS Servers to Windows95, Windows NT and other systems that support the DHCP client.
IP Pool Range	This field specifies the first and the last of contiguous IP address of the IP address pool.
Show Client	Click this button, the screen of Fig 3.5.2-4 appears, which shows the assigned IP address of the clients.
Max Lease Time	The Lease time determines the period for which the PCs retain the IP addresses assigned to them without changing them.
Domain Name	Input the domain name here if you know. If you leave this blank, the domain name obtained by DHCP from the ISP is used. While you must enter host name(System Name) on each individual computer, the domain name can be assigned from this router via DHCP server.
Gateway Address	Enter the IP default gateway of the IP address pool.
MAC-Base Assignment	Click this button, the screen of Fig3.5.2-5 appears. This function all you assign IP addresses on the LAN to specific individual computer based on their MAC address.

Apply Changes	Click this button to save the changes of this page.

Click **Show Client**, the following window appears. In this window, you can view the IP address assigned to each DHCP client.

Fig 3.4.2-4

The following table describes the fields in this screen.

Label	Description
IP Address	This field displays the IP address relative to the MAC address.
MAC Address	This field displays the MAC(Media Access Control) address of the computer. Every Ethernet device has a unique MAC address. The MAC address is assigned at the factory and consists of six pairs of hexadecimal character, for example, 00-A0-C5-00-02-12.
Time Expired(s)	Here shows the lease time. The Lease time determines the period for which the PCs retain the IP addresses assigned to them without changing them.
Refresh	Click this button to refresh the Active DHCP Client Table.
Close	Click this button to close this window.

Click **MAC-Base Assignment** button, the below window appears. In this page, you can assign IP addresses on the LAN to specific individual computers based on their MAC address.

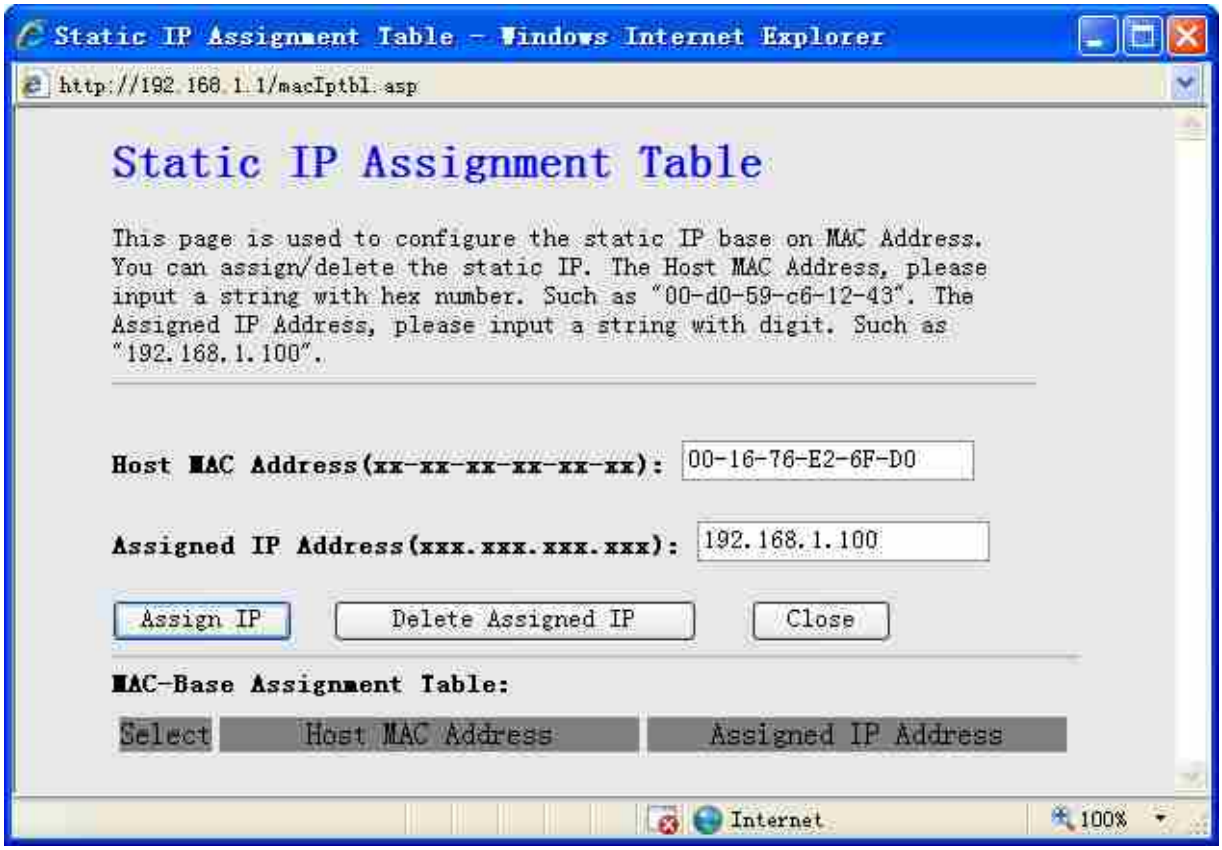
Static IP Assignment Table - Windows Internet Explorer
http://192.168.1.1/macIptbl.asp
Static IP Assignment Table
This page is used to configure the static IP base on MAC Address. You can assign/delete the static IP. The Host MAC Address, please input a string with hex number. Such as "00-d0-59-c6-12-43". The Assigned IP Address, please input a string with digit. Such as "192.168.1.100".
Host MAC Address(xx-xx-xx-xx-xx-xx): 00-16-76-E2-6F-D0
Assigned IP Address(xxx.xxx.xxx.xxx): 192.168.1.100
Assign IP
Delete Assigned IP
Close
MAC-Base Assignment Table:
Select
Host MAC Address
Assigned IP Address
Internet
100%

Fig 3.4.2-5

The following table describes the fields of this screen.

Label	Description
Host MAC Address	Type the MAC address of a computer on your LAN
Assigned IP Address	This field specifics the IP of the IP address pool.
Assign IP	Click this button after entered **Host MAC Address** and **Assigned IP Address**, a row will be added in **MAC-Base Assignment Table**.
Modify Assigned IP	Select a row in **MAC-Base Assignment Table**, the MAC address and IP address will appears **Host MAC Address** and **Assigned IP Address.** After modified the MAC Address and IP Address, click this button to save the changes.
Delete Assigned IP	Select a row in **MAC-Base Assignment Table**, then click this button, this row will be deleted.
Close	Click this button to close this window.
MAC-Base Assignment Table	This table shows the assigned IP address based on the MAC address.

3.5 WAN

Click **WAN Interface** in the menu to open the sub-menu which contains 3 items: **WAN Interface**、**ATM Settings** and **ADSL Settings**.

3.5.1 WAN Interface

Click **WAN Interface** in the sub-menu to open the screen of Fig 3.5.1-1. In this page, you can configure WAN Interface of your router.

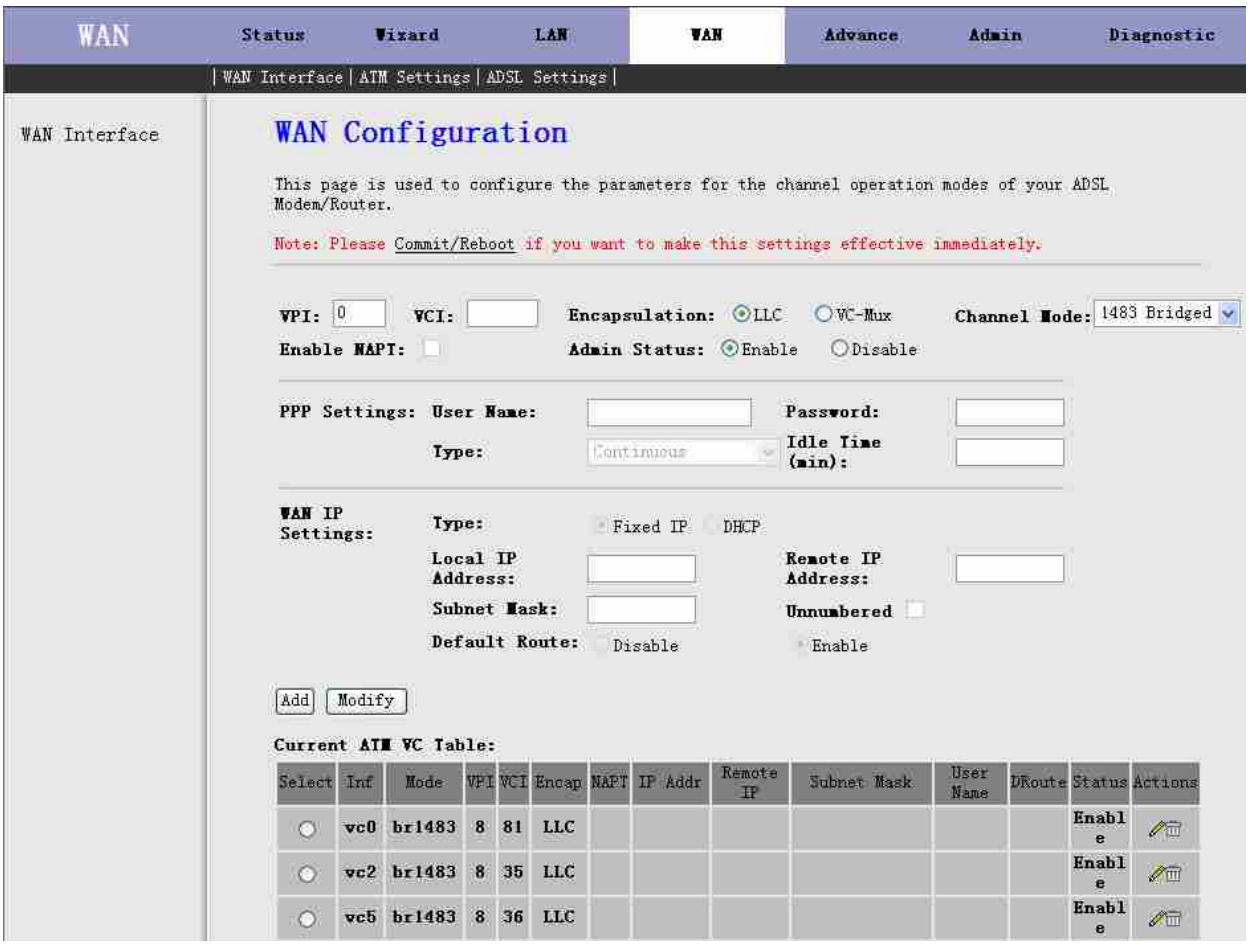
WAN
Status
Wizard
LAN
WAN
Advance
Admin
Diagnostic
| WAN Interface | ATM Settings | ADSL Settings |
WAN Interface
WAN Configuration
This page is used to configure the parameters for the channel operation modes of your ADSL Modem/Router.
Note: Please Commit/Reboot if you want to make this settings effective immediately.
VPI: 0 VCI: Encapsulation: LLC VC-Mux Channel Mode: 1483 Bridged
Enable NAPT: Admin Status: Enable Disable
PPP Settings: User Name: Password:
Type: Continuous Idle Time (min):
WAN IP Settings: Type: Fixed IP DHCP
Local IP Address: Remote IP Address:
Subnet Mask: Unnumbered
Default Route: Disable Enable
Add Modify
Current ATM VC Table:
Select Inf Mode VPI VCI Encap NAPT IP Addr Remote IP Subnet Mask User Name DRoute Status Actions
vc0 br1483 8 81 LLC Enable
vc2 br1483 8 35 LLC Enable
vc5 br1483 8 36 LLC Enable

Fig 3.5.1-1

Label	Description
VPI	(Virtual Path Identifier) The virtual path between two points in an ATM network, and its valid value is from 0 to 255
VCI	The virtual channel between two points in an ATM network, ranging from 32 to 65535 (1 to 31 are reserved for known protocols)
Encapsulation	Choices are LLC and VC-Mux.
Channel Mode	There are five choices: 1483 Bridged, 1483 MER, PPPoE, PPPoA and 1483 Routed.
Admin Status	If select Disable, this PVC will be unusable.
Enable NAPT	Select it to enable the NAPT functions of the MODEM. If you are not to enable NAPT and intend the user of the MODEM to access the Internet normally, you must add a route on the uplink equipment; otherwise the access to the Internet will fail. Normally, it is required to enable NAPT.
PPP Settings	
Login Name	The correct user name that your ISP has provided to you.
Password	The correct password that your ISP has provided to you
Connection Type	The choices are **Continuous**, **Connect on Demand** and **Manual**.

Idle Time(min)	If select **Connect on Demand**, you need to input the idle timeout time. Within the preset minutes, if the MODEM doesn't detect the flow of the user continuously, the MODEM will automatically disconnect the PPPOE connection.
WAN IP Settings	
Type	The choices are **Fixed IP** and **Use DHCP**. If set **Fixed IP**, you should enter the **Local IP Address**, **Remote IP Address** and **Subnet Mask**. If set **Use DHCP**, your MODEM will be a DHCP client, the WAN IP will be assigned by the remote DHCP server.
Local IP Address	This is the IP of WAN interface which is provided by your ISP.
Remote IP Address	This is the gateway IP which is provided by your ISP.
Subnet Mask	This is the Subnet Mask of the **Local IP Address**.
Unnumbered	Select this checkbox to enable IP Unnumbered function.
Default Route	
Add	After configuring the parameters of this page, click this button then a new PVC will be added into **Current ATM VC Table**.
Modify	Select a PVC in the **Current ATM VC Table**, then modify the parameters of this PVC. When you finish, click this button to apply the change of this PVC.
Delete Selected	Select a PVC in the **Current ATM VC Table**, then click this button to delete this PVC.
	Click this button, the following screens will appear. In these pages, you can modify the PVCs' parameters.

If the PVC uses PPPoE mode, click , the Fig 3.5.1-2 will appear. In this page, you can configure this PPPoE PVC's parameters.

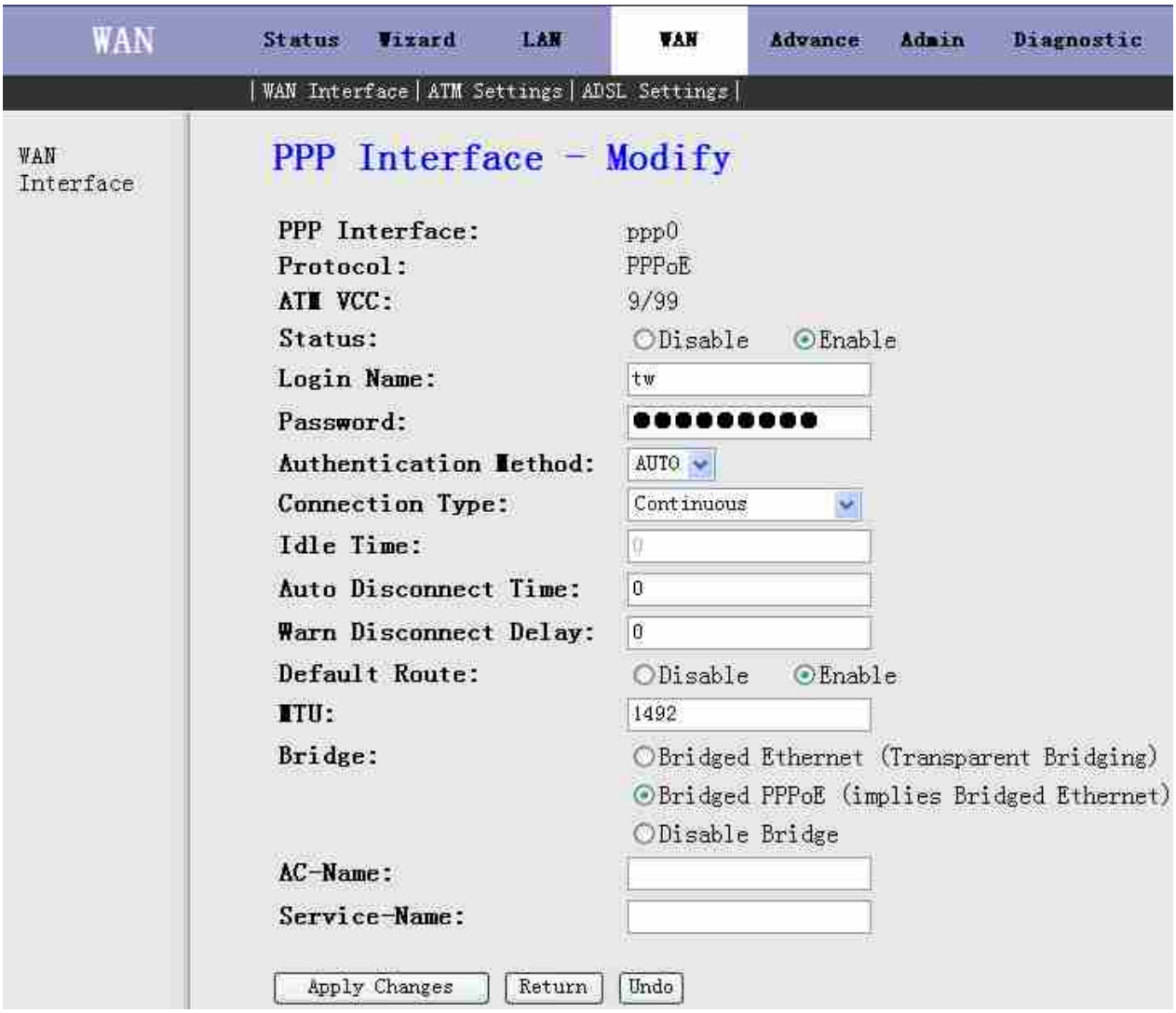

Fig 3.5.1-2

3.5.2 ATM Settings

Click **ATM Setting**, the screen of Fig 3.5.1-3 will appear. In this page, you can configure the parameters of the ATM for your ADSL router, include QoS type, PCR, CDVT, SCR and MBS.

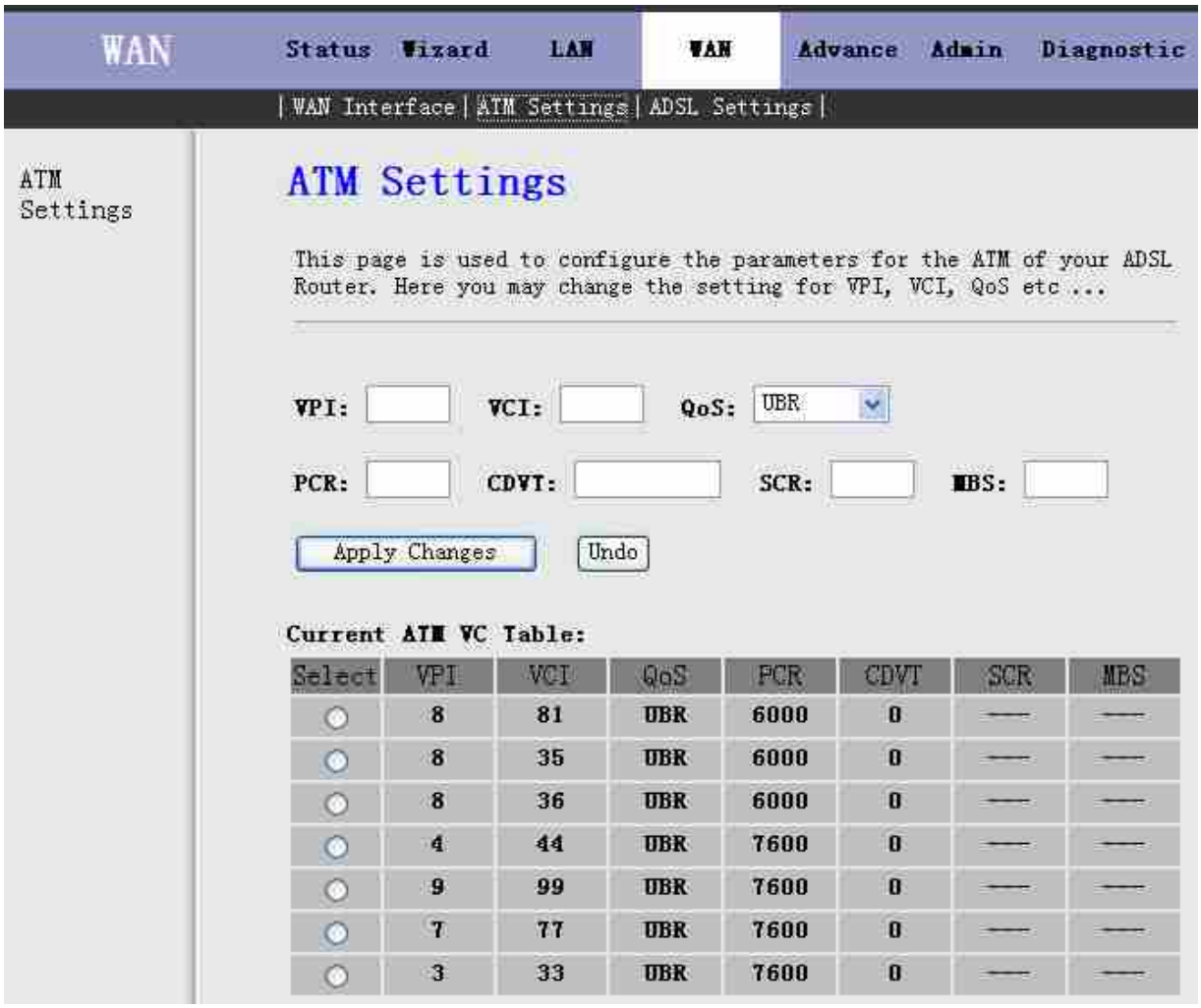

Fig 3.5.1-3

3.5.3 ADSL Settings

Click **ADSL Interface** in the sub-menu to open the screen of Fig 3.5.2. In this page, you can select the DSL modulation. Mostly, the user just need to remain this factory default setting. Our modem support these modulations: G.Dmt, G.lite, T1.413, ADSL2, ADSL2+, AnnexL and AnnexM. The router will negotiate the modulation mode with the DSLAM.

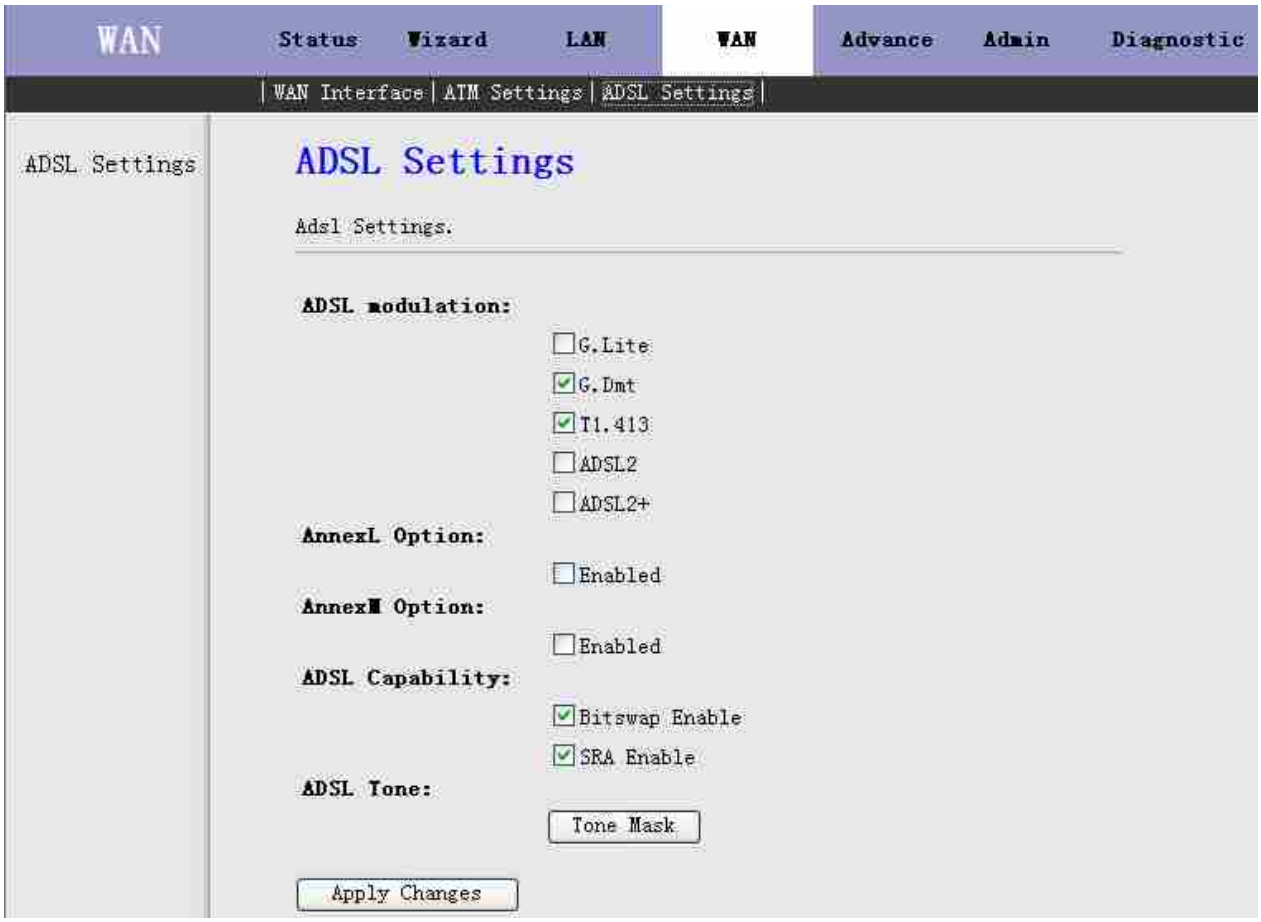

Fig 3.5.2

3.6 Advance

Click **Advance** in the menu to open the sub-menu which contains 6 items: **DNS**, **Firewall**, **Virtual Server**, **Routing**, **IP QOS,** and **Others**.

3.6.1 DNS

Click **DNS** in the sub-menu to open the menu in the left bar, whick contains two items:**DNS Server** and **DDNS**.

3.6.1.1 DNS Server

Short for Domain Name System (or Service or Server), an Internet service that translates domain names into IP addresses. Because domain names are alphabetic, they're easier to remember. The Internet however, is really based on IP addresses. Every time you use a domain name, therefore, a DNS service must translate the name into the corresponding IP address. For example, the domain name www.example.com might translate to 198.105.232.4.

The DNS system is, in fact, its own network. If one DNS server doesn't know how to translate a part domain name, it asks another one, and so on, until the correct IP address is returned.

Click **DNS Server** in the left bar to open the screen of Fig 3.6.1.1.

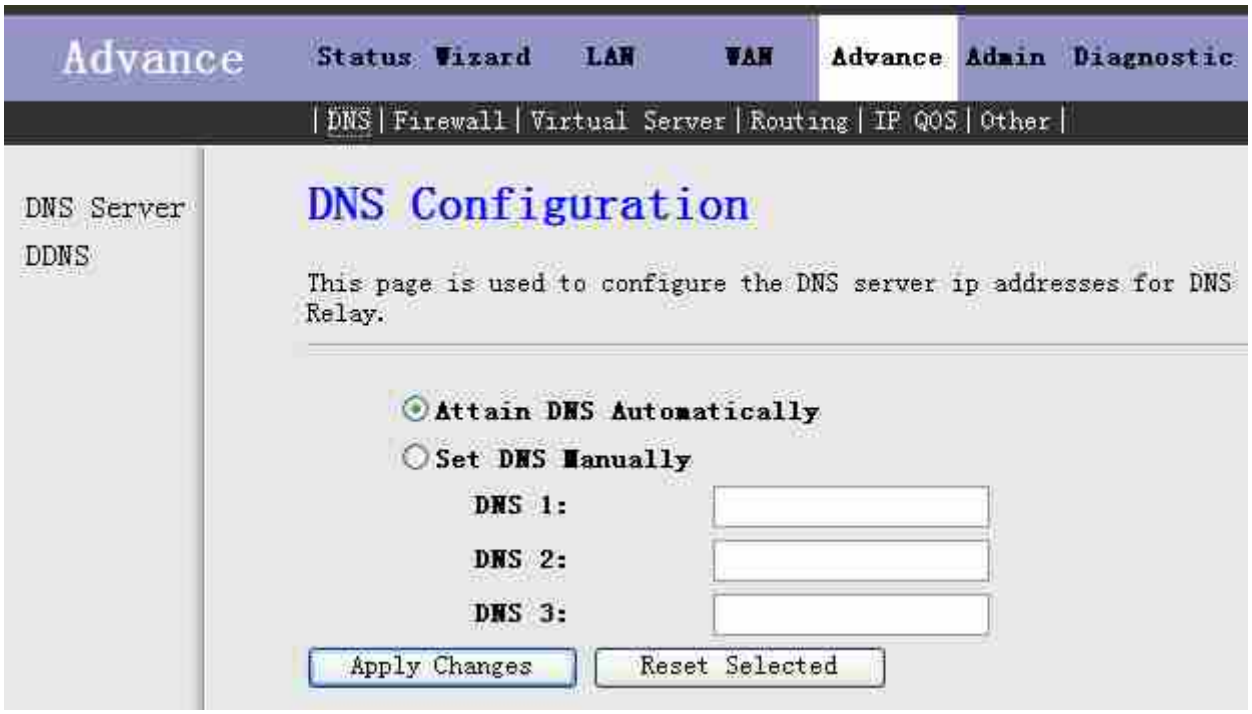
Advance
Status Wizard LAN WAN Advance Admin Diagnostic
DNS | Firewall | Virtual Server | Routing | IP QOS | Other
DNS Server
DDNS
DNS Configuration
This page is used to configure the DNS server ip addresses for DNS Relay.
Attain DNS Automatically
Set DNS Manually
DNS 1:
DNS 2:
DNS 3:
Apply Changes
Reset Selected

Fig 3.6.1.1

Label	Description
Attain DNS Automatically	When this checkbox is selected, this router will accept the first received DNS assignment from one of the PPPoA, PPPoE or MER enabled PVC(s) during the connection establishment.
Set DNS Manually	When this checkbox is selected, please enter the primary and optional secondary DNS server IP addresses.
Apply Changes	Click this button to save the settings of this page.
Reset Selected	Click this button to begin configuring this screen afresh.

3.6.1.2 DDNS

Click **DDNS** in the left pane to open the screen of Fig 3.6.1.2.

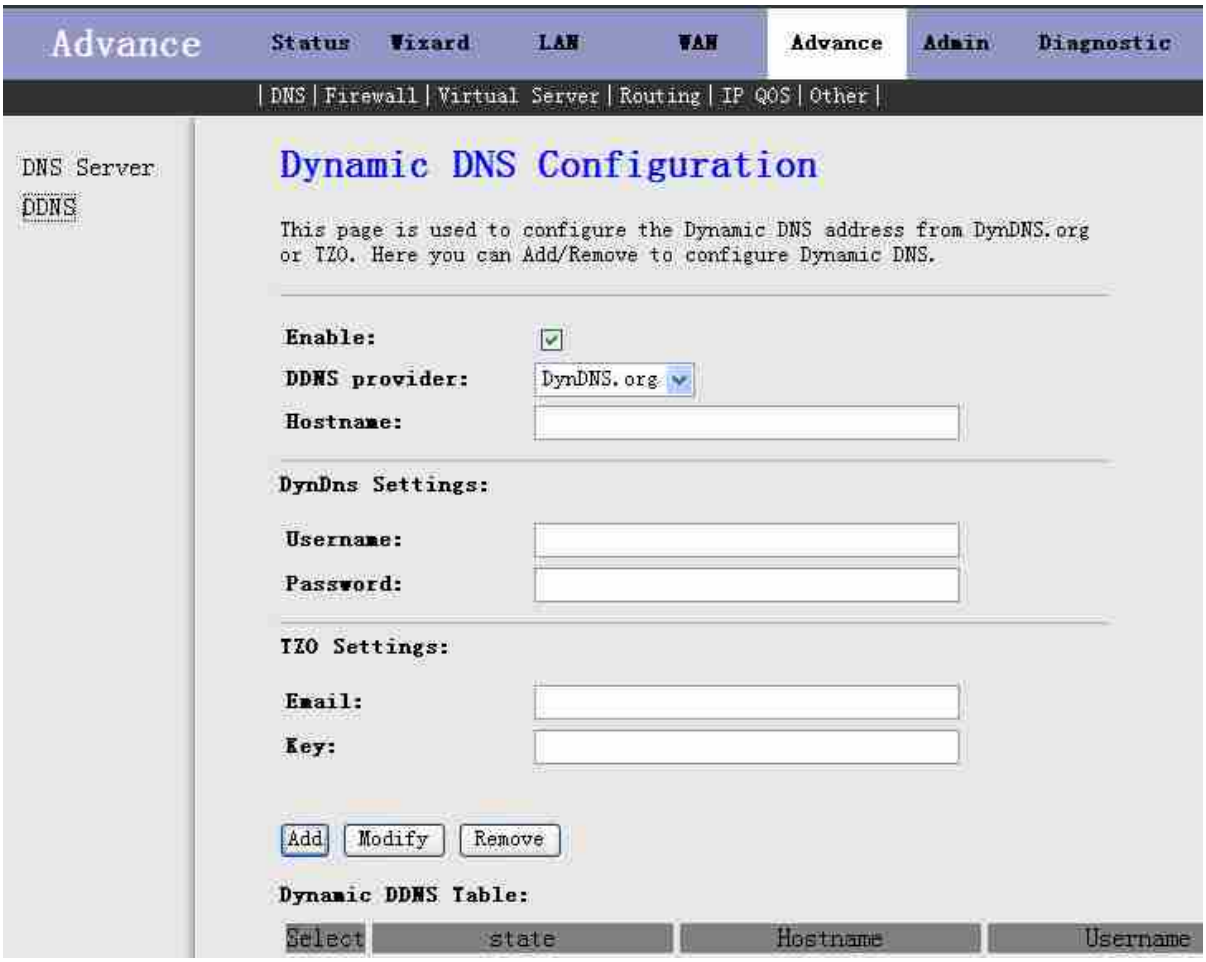

Fig 3.6.1.2

3.6.2 Firewall

Click **Firewall** in the sub-menu to open the menu in the left bar, whick contains three items:**IP\Port Fileter, MAC Filter** and **URL Blocking**.

3.6.2.1 IP\Port Filter

Click **IP\Port Filter** in the left bar to open the screen of Fig 3.6.2.1. Entries in this table are used to restrict certain types of data packets through the Gateway. Use of such filters can be helpful in securing or restricting your local network.

Click the button **Apply Changes** to save the settings of this page.

Click the button **Add** to add a new rule of the IP\Port Filter.

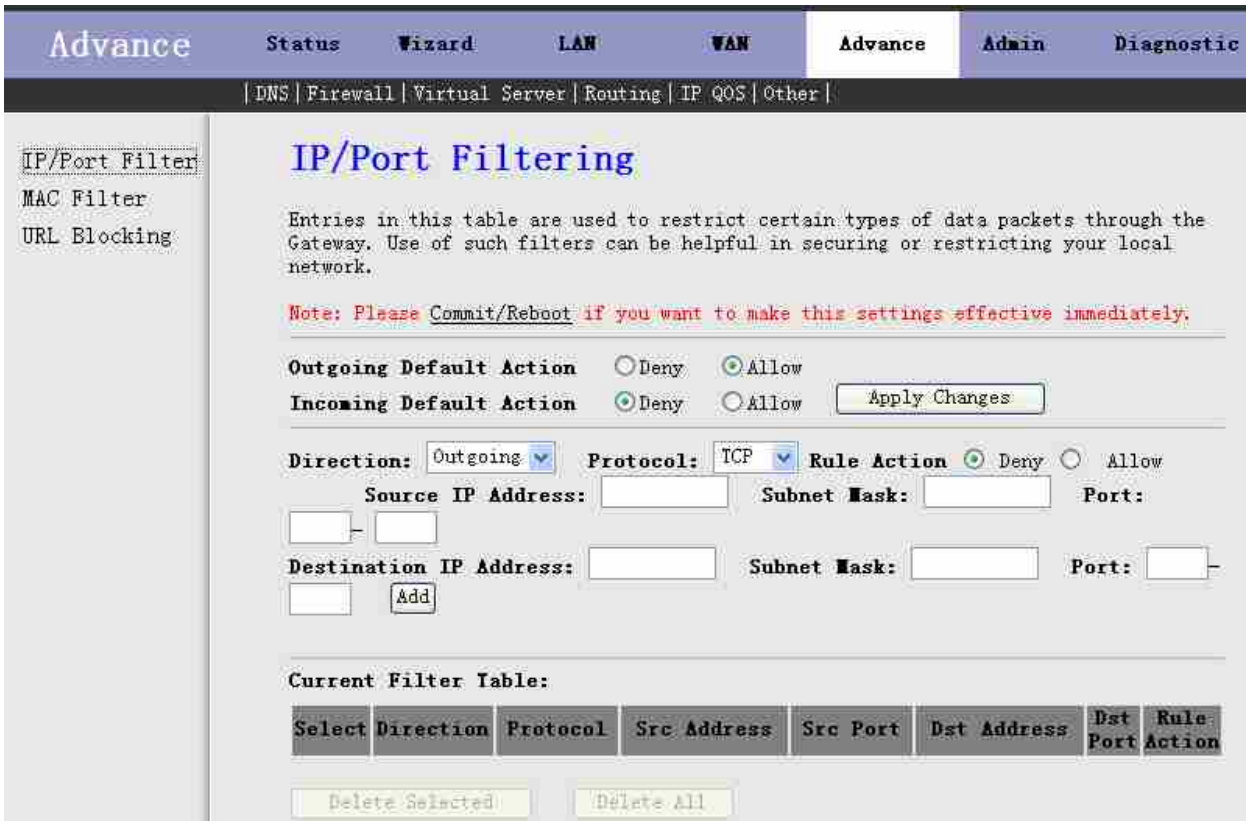

Fig 3.6.2.1

3.6.2.2 MAC Filter

Click **MAC Filter** in the left bar to open the screen of Fig 3.6.2.2. Entries in this table are used to restrict certain types of data packets from your local network to Internet through the Gateway. Use of such filters can be helpful in securing or restricting your local network.

Click the button **Apply Changes** to save the settings of this page.

Click the button **Add** to add a new rule of the MAC Filter.

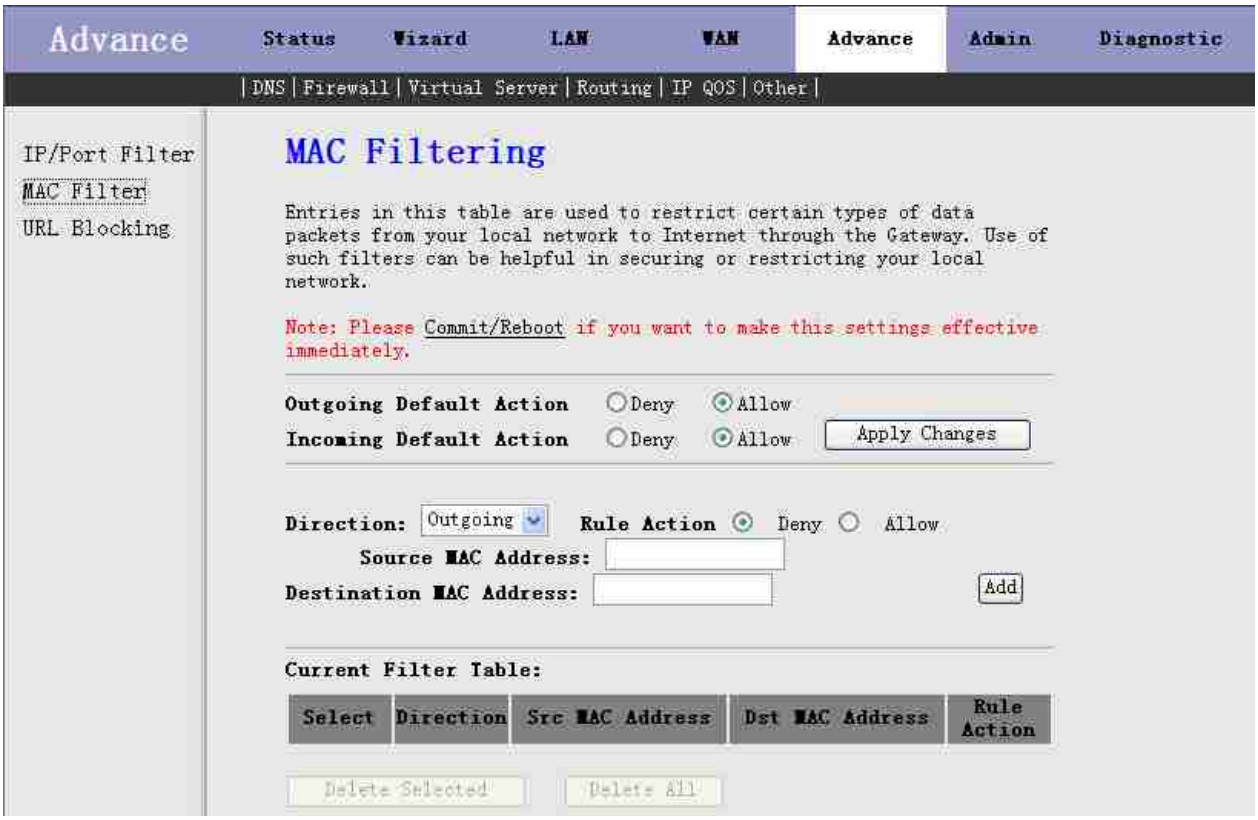

Fig 3.6.2.2

3.6.2.3 URL Blocking

Click **URL Blocking** in the left bar to open the screen of Fig 3.6.2.3. This page is used to configure the Blocked FQDN(Such as tw.yahoo.com) and filtered keyword. Here you can add/delete FQDN and filtered keyword.

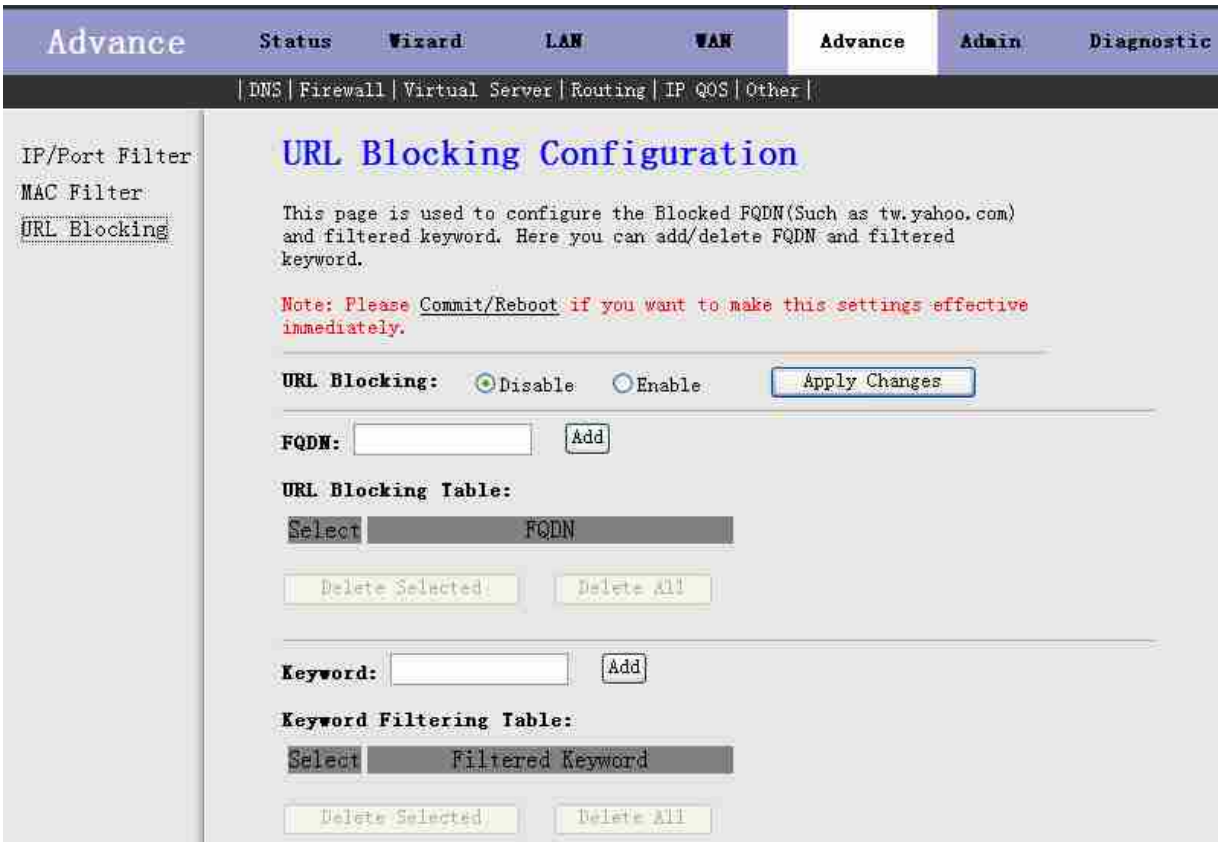

Fig 3.6.2.3

3.6.3 Virtual Server

Click **Virtual Server** in the sub-menu to open the menu in the left bar,whick contains two items:**Services** and **DMZ Settings**.

3.6.3.1 Services

Click **Services** in the left pane to open the screen of Fig 3.6.3.1. This page is used to enable the servers in the local network.

Click the button **Add** to add a virtual server.

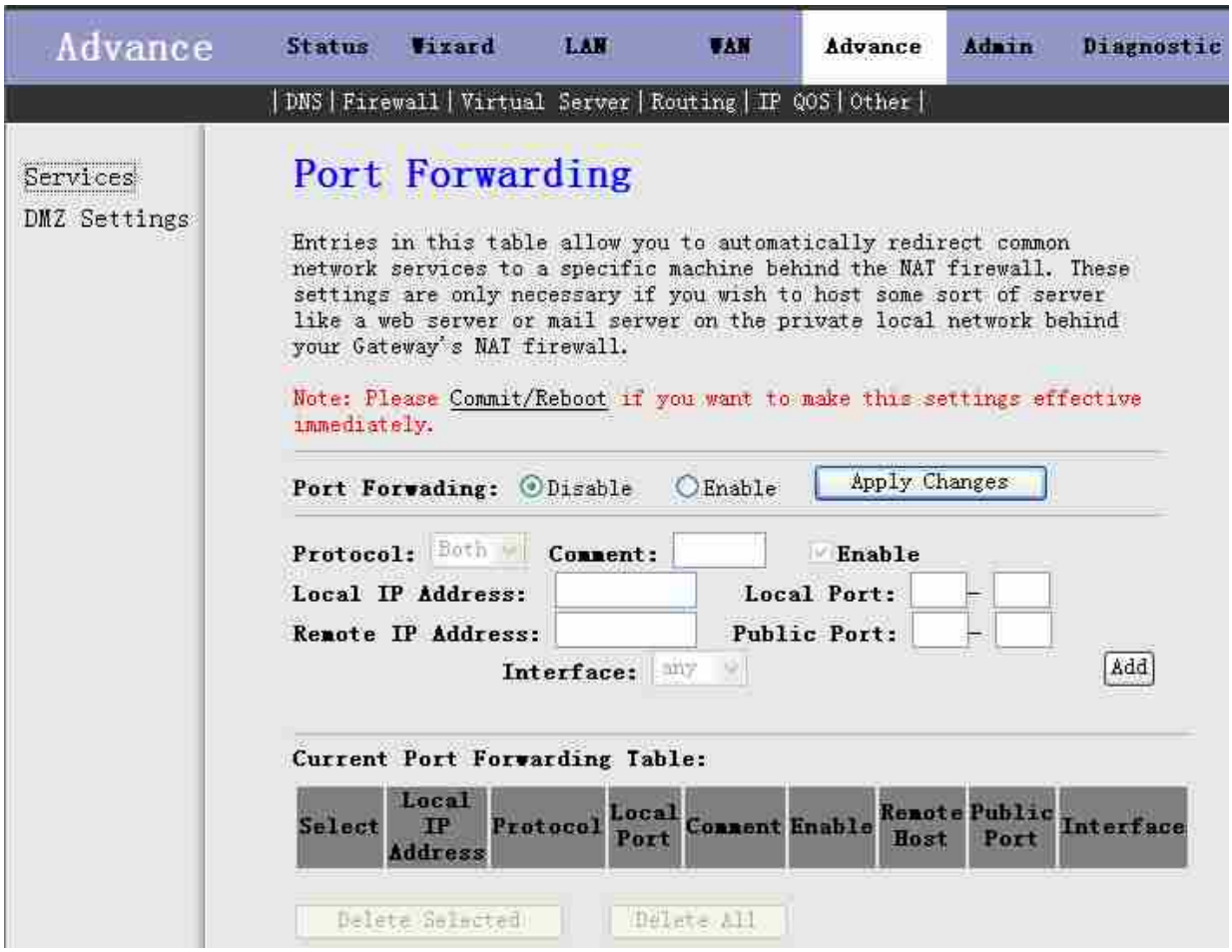

Fig 3.6.3.1

3.6.3.2 DMZ Settings

Click **DMZ Settings** in the left bar to open the screen of Fig 3.6.3.2. A Demilitarized Zone is used to provide Internet services without sacrificing unauthorized access to its local private network. Typically, the DMZ host contains devices accessible to Internet traffic, such as Web (HTTP) servers, FTP servers, SMTP (e-mail) servers and DNS servers.

Select the checkbox **Enable DMZ** to enable this function. Then input a IP Address of the DMZ host.

Click the button **Apply Changes** to save the settings of this page.

Advance
Status
Wizard
LAN
WAN
Advance
Admin
Diagnostic
DNS | Firewall | Virtual Server | Routing | IP QOS | Other
Services
DMZ Settings
DMZ
A Demilitarized Zone is used to provide Internet services without sacrificing unauthorized access to its local private network. Typically, the DMZ host contains devices accessible to Internet traffic, such as Web (HTTP) servers, FTP servers, SMTP (e-mail) servers and DNS servers.
Note: Please Commit/Reboot if you want to make this settings effective immediately.
DMZ Host:
Disable
Enable
DMZ Host IP Address:
Apply Changes

Fig 3.6.3.2

3.6.4 Routing

Click **Routing** in the sub-menu to open the menu in the left bar, whick contains two items:**RIP** and **Static Route.**

3.6.4.1 RIP

Click **RIP** in the left bar to open the screen of Fig 3.6.4.1. Enable the RIP if you are using this device as a RIP-enabled router to communicate with others using the Routing Information Protocol. This page is used to select the interfaces on your deviceis that use RIP, and the version of the protocol used.

Fig 3.6.4.1

3.6.4.2 Static Route

Click **Static Route** in the left bar to open the screen of Fig 3.6.4.2-1. This page is used to configure the routing information. Here you can add/delete IP routes.

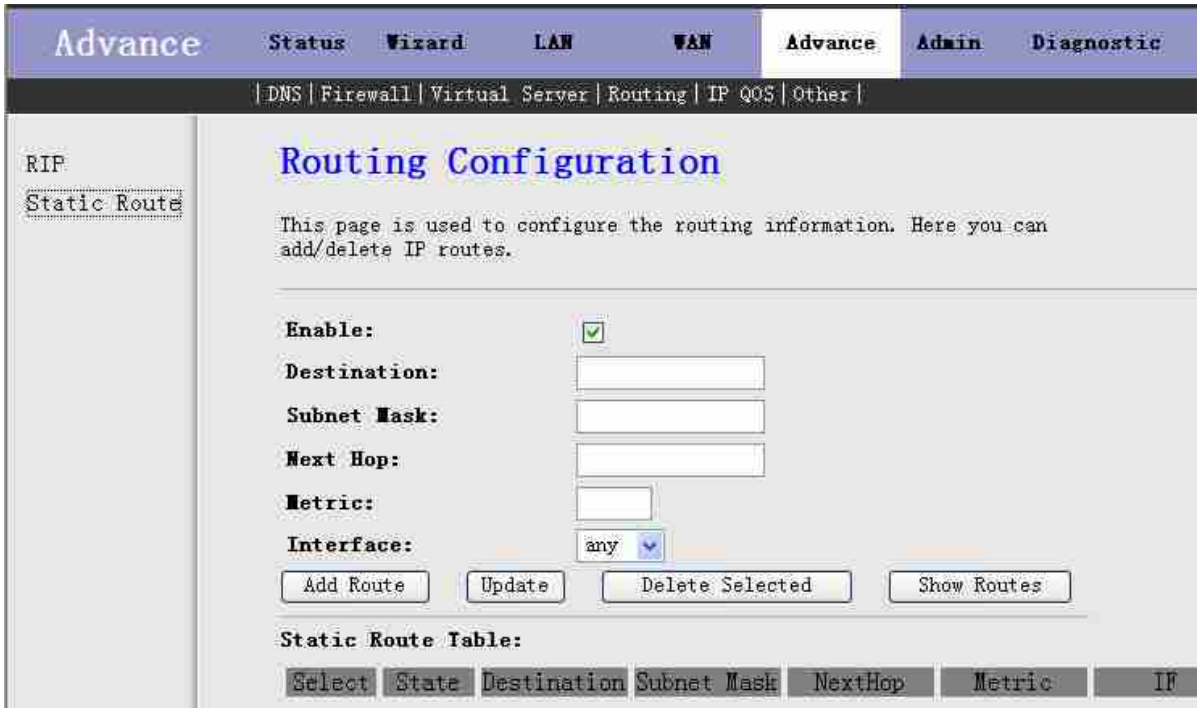

Fig 3.6.4.2-1

Click the button Show Routes, the below window will appear. The table shows a list of destination routes commonly accessed by your network.

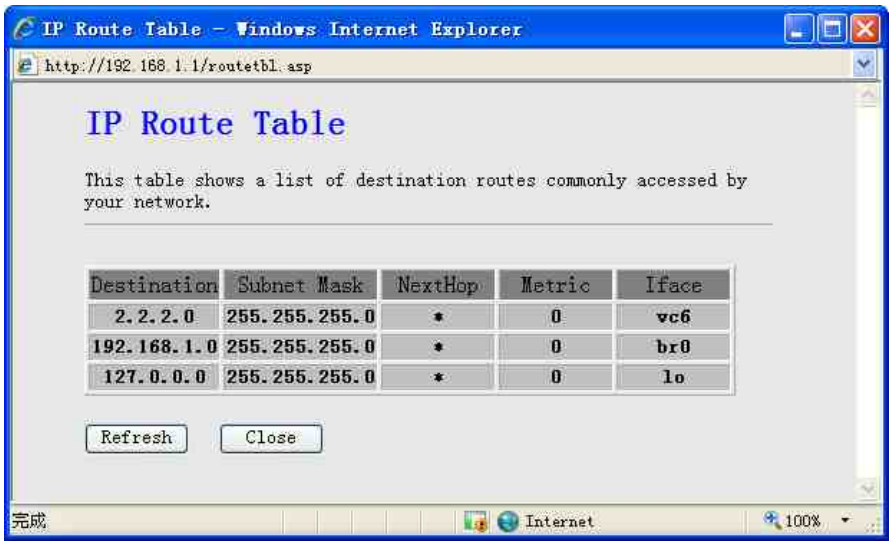

Fig 3.6.4.2-2

3.6.5 IP QoS

Click **IP QoS** in the sub-menu to open the screen of Fig 3.6.5. Entries in this table are used to assign the precedence for each incoming packet based on physical LAN port, TCP/UDP port number, and source/destination IP address/subnet masks.

Click the button **Apply Changes** to save the settings of this page.

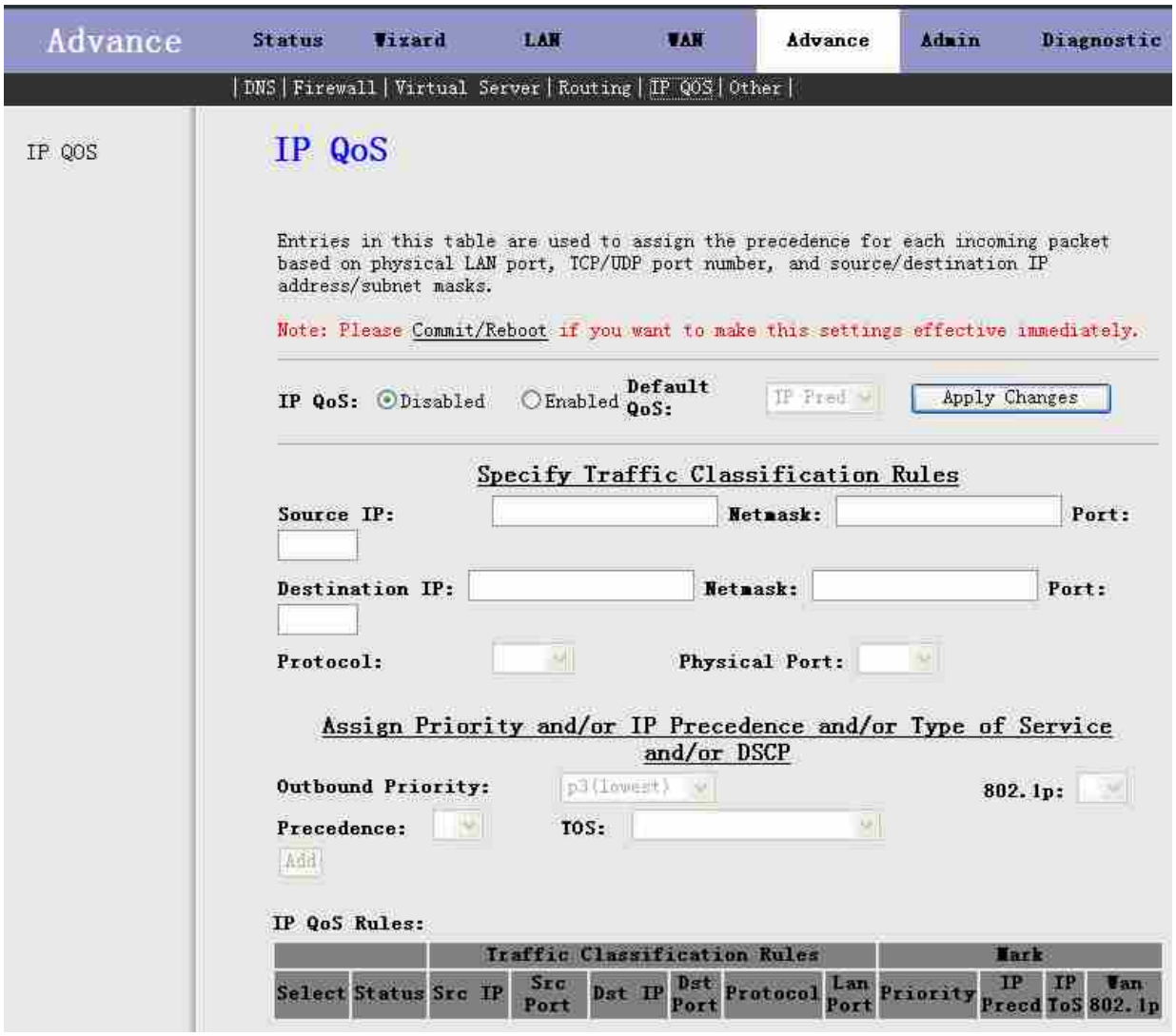
Advance
Status
Wizard
LAN
WAN
Advance
Admin
Diagnostic
DNS | Firewall | Virtual Server | Routing | IP QOS | Other
IP QOS
IP QoS
Entries in this table are used to assign the precedence for each incoming packet based on physical LAN port, TCP/UDP port number, and source/destination IP address/subnet masks.
Note: Please Commit/Reboot if you want to make this settings effective immediately.
IP QoS: Disabled Enabled Default QoS: IP Pred Apply Changes
Specify Traffic Classification Rules
Source IP: Netmask: Port:
Destination IP: Netmask: Port:
Protocol: Physical Port:
Assign Priority and/or IP Precedence and/or Type of Service and/or DSCP
Outbound Priority: p3(lowest) 802.1p:
Precedence: TOS:
Add
IP QoS Rules:
Traffic Classification Rules
Mark
Select Status Src IP Src Port Dst IP Dst Port Protocol Lan Port Priority IP Precd IP ToS Wan 802.1p

Fig 3.6.5

3.6.6 Other

Click **Others** in the sub-menu to open the menu in the left bar,whick contains four items:**IGMP Proxy, UPNP, Bridge** and **IP PassThrough.**

3.6.6.1 IGMP Proxy

Click **IGMP Proxy** in the left bar to open the screen of Fig 3.6.6.1. IGMP proxy enables the system to issue IGMP host messages on behalf of hosts that the system discovered through standard IGMP interfaces. The system acts as a proxy for its hosts after you enable it.

Click **Apply Changes** to save the settings of this page.

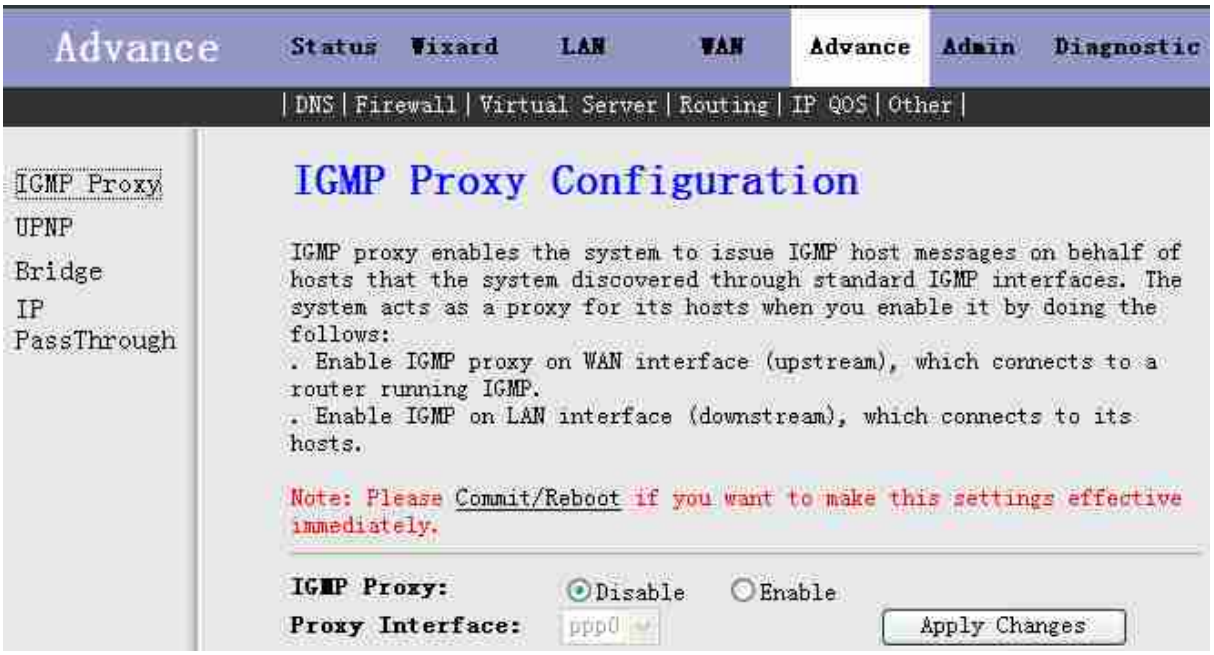
Advance
Status
Wizard
LAN
WAN
Advance
Admin
Diagnostic
DNS | Firewall | Virtual Server | Routing | IP QOS | Other
IGMP Proxy
UPNP
Bridge
IP PassThrough
IGMP Proxy Configuration
IGMP proxy enables the system to issue IGMP host messages on behalf of hosts that the system discovered through standard IGMP interfaces. The system acts as a proxy for its hosts when you enable it by doing the follows:
. Enable IGMP proxy on WAN interface (upstream), which connects to a router running IGMP.
. Enable IGMP on LAN interface (downstream), which connects to its hosts.
Note: Please Commit/Reboot if you want to make this settings effective immediately.
IGMP Proxy:
Disable
Enable
Proxy Interface:
ppp0
Apply Changes

Fig 3.6.6.1

3.6.6.2 UPNP

Click **UPNP** in the left bar to open the screen of Fig 3.6.6.2. This page is used to configure UPnP. The system acts as a daemon after you enable it.

Click **Apply Changes** to save the settings of this page.

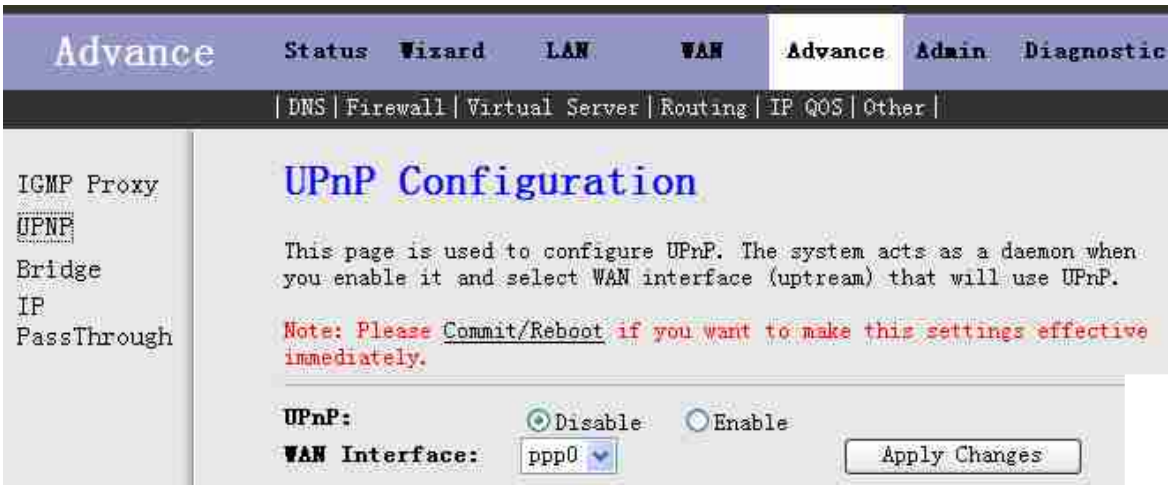

Fig 3.6.6.2

3.6.6.3 Bridge

Click **Bridge** in the left bar to open the screen of Fig 3.6.6.3-1. This page is used to configure the bridge parameters. Here you can change the settings or view some information on the bridge and its attached ports.

Fig 3.6.6.3-1

Click **Show MACs** button in Fig 3.6.6.3-1, the below window will appear. This table shows a list of learned MAC addresses for this bridge.

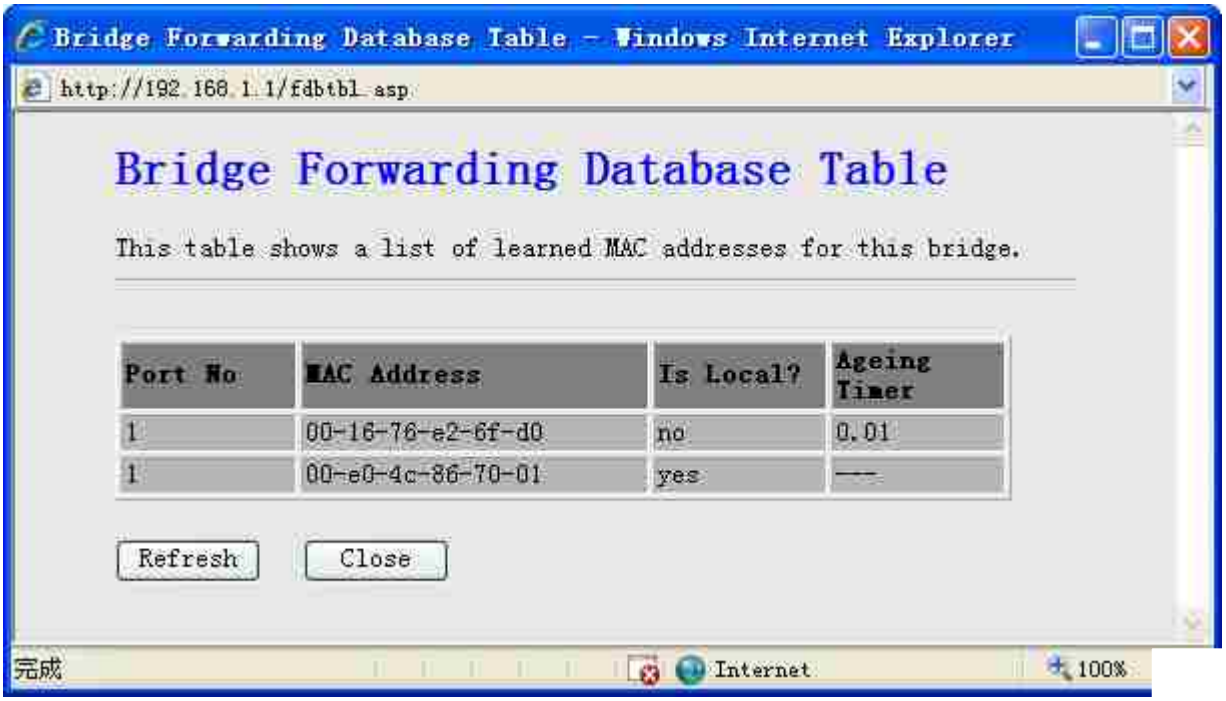

Fig 3.6.6.3-2

3.6.6.4 IP PassThrough

Click **IP PassThrough** in the left bar to open the screen of Fig 3.6.6.4. The IP PassThrough has the other name ZIPB or IP Extension. In this page, you can enable and configure IP PassThrough function.

Fig 3.6.6.4

3.7 Admin

Click **Admin** in the menu to open the sub-menu which contains 9 items: **Remote Access**, **Commit/Reboot**, **Password**, **Backup/Restore**, **Upgrade Fireware, Time Zone, SNMP ,TR069** and **ACL**.

3.7.1 Remote Access

Click **Remote Access** in the sub-menu to open the screen of Fig 3.7.1. In this page, you can enable or disable the services which will be used by remote host. For example, if TELNET service is enabled and port is 23, the remote host can access this router by telnet through port 23.

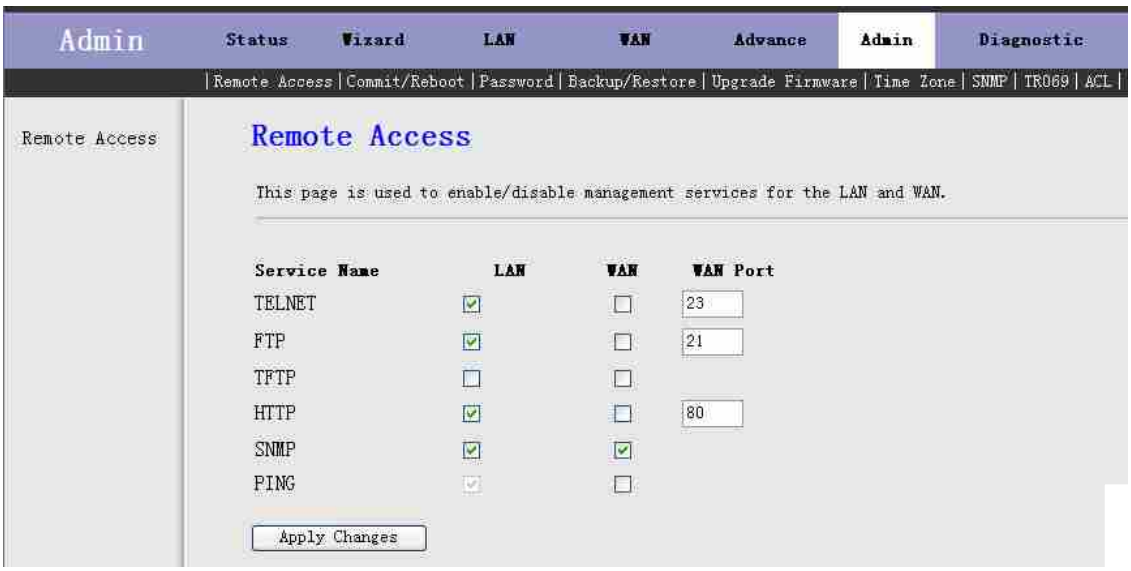

Fig 3.7.1

3.7.2 Commit/Reboot

Click **Commit/Reboot** in the sub-menu to open the screen of Fig 3.7.2. In this page, you can set the router reboot to default settings or set the router save the current settings then reboot.

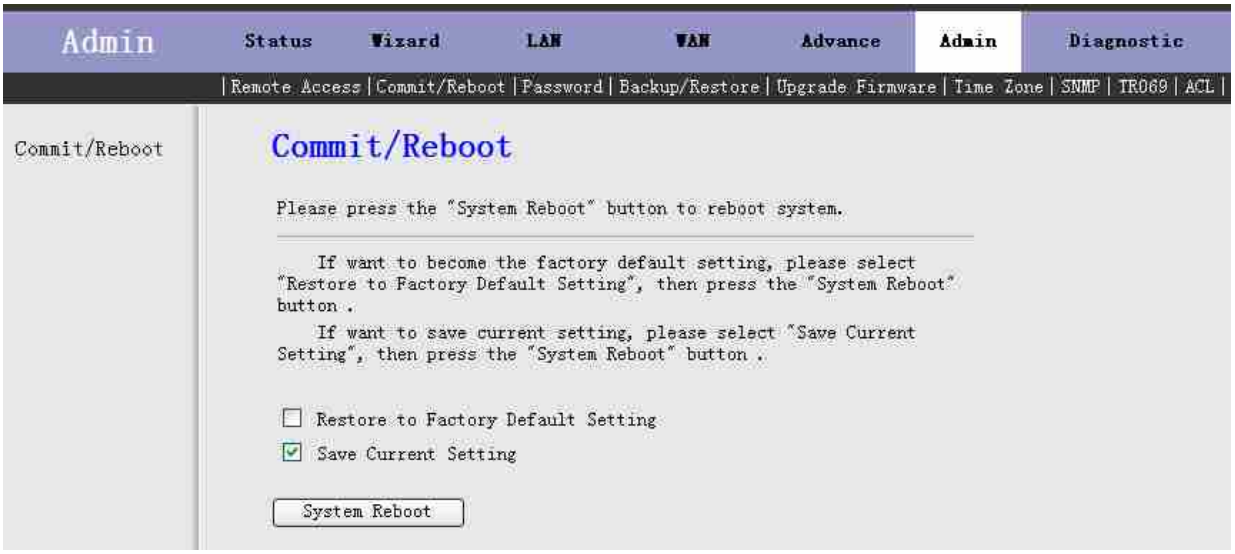
Admin
Status
Wizard
LAN
WAN
Advance
Admin
Diagnostic
Remote Access | Commit/Reboot | Password | Backup/Restore | Upgrade Firmware | Time Zone | SNMP | TR069 | ACL |
Commit/Reboot
Commit/Reboot
Please press the "System Reboot" button to reboot system.
If want to become the factory default setting, please select "Restore to Factory Default Setting", then press the "System Reboot" button .
If want to save current setting, please select "Save Current Setting", then press the "System Reboot" button .
Restore to Factory Default Setting
Save Current Setting
System Reboot

Fig 3.7.2

Label	Description
Restore to Factory Default Setting	Select this checkbox to reset router to default settings.
Save Current Setting	Select this checkbox to save the current settings and reboot router.
System Reboot	Click this button to reboot the router according to the above option.

3.7.3 Password

Click **Password** in the sub-menu to open the screen of Fig 3.7.3. In this page, you can change the password of the user, include admin and user. The super user name and password are admin/admin as default, and the The common user name and password are user/user.

Fig 3.7.3

Label	Description
User Name	Select the user name in the drop-down list box. The choices are **admin** and **user**.
Old Password	After selected the user name, input the old password of the user here.
New Password	Input the new password what you want to set of the user.
Confirmed Password	Input the new password again.
Apply Changes	Click this button to save the settings of this page.
Reset	Click this button to begin configuring the password afresh.

3.7.4 Backup/Restore

Click **Backup/Restore** in the sub-menu to open the screen of Fig 3.7.4. In this page, you can backup the current settings to a file and restore the settings from the file which was saved previously.

IMPORTANT! Do not turn off your router or press the Reset button while these procedures are in progress.

Admin
Status
Wizard
LAN
WAN
Advance
Admin
Diagnostic
Remote Access | Commit/Reboot | Password | Backup/Restore | Upgrade Firmware | Time Zone | SNMP | TR069 | ACL
Backup/Restore
Backup/Restore Settings
This page allows you to backup current settings to a file or restore the settings from the file which was saved previously. Besides, you could reset the current configuration to factory default.
Save Settings to File:
Save...
Load Settings from File:
Browse...
Upload

Fig 3.7.4

Label	Description
Save Settings to File	Click the **Save** button, then select the path and save the configuration file of your router.
Load Settings from File	Click the **Browse** button to select the configuration file.
Upload	Selected the configuration file of router, click Upload button to begin restore the router configuration.

3.7.5 Upgrade Fireware

Click **Upgrade Fireware** in the sub-menu to open the screen of Fig 3.7.5. In this page, you can upgrade the fireware of this router.

IMPORTANT! Do not turn off your router or press the Reset button while this procedure is in progress.

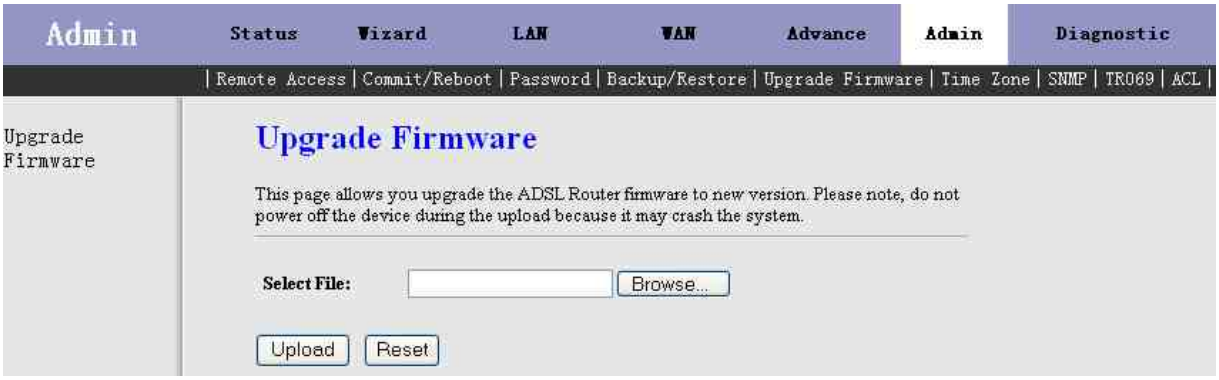
Admin
Status
Wizard
LAN
WAN
Advance
Admin
Diagnostic
| Remote Access | Commit/Reboot | Password | Backup/Restore | Upgrade Firmware | Time Zone | SNMP | TR069 | ACL |
Upgrade Firmware
Upgrade Firmware
This page allows you upgrade the ADSL Router firmware to new version. Please note, do not power off the device during the upload because it may crash the system.
Select File:
Browse...
Upload
Reset

Fig 3.7.5

Label	Description
Select File	Click the **Browse** button to select the Fireware file.
Upload	Selected the Fireware file, click **Upload** button to begin upgrading the Fireware.
Reset	Click this button to begin selecting the Fireware file afresh.

3.7.6 Time Zone

Click **Time Zone** in the sub-menu to open the screen of Fig 3.7.6. In this page, you can set the system time manually or get the system time from the time server.

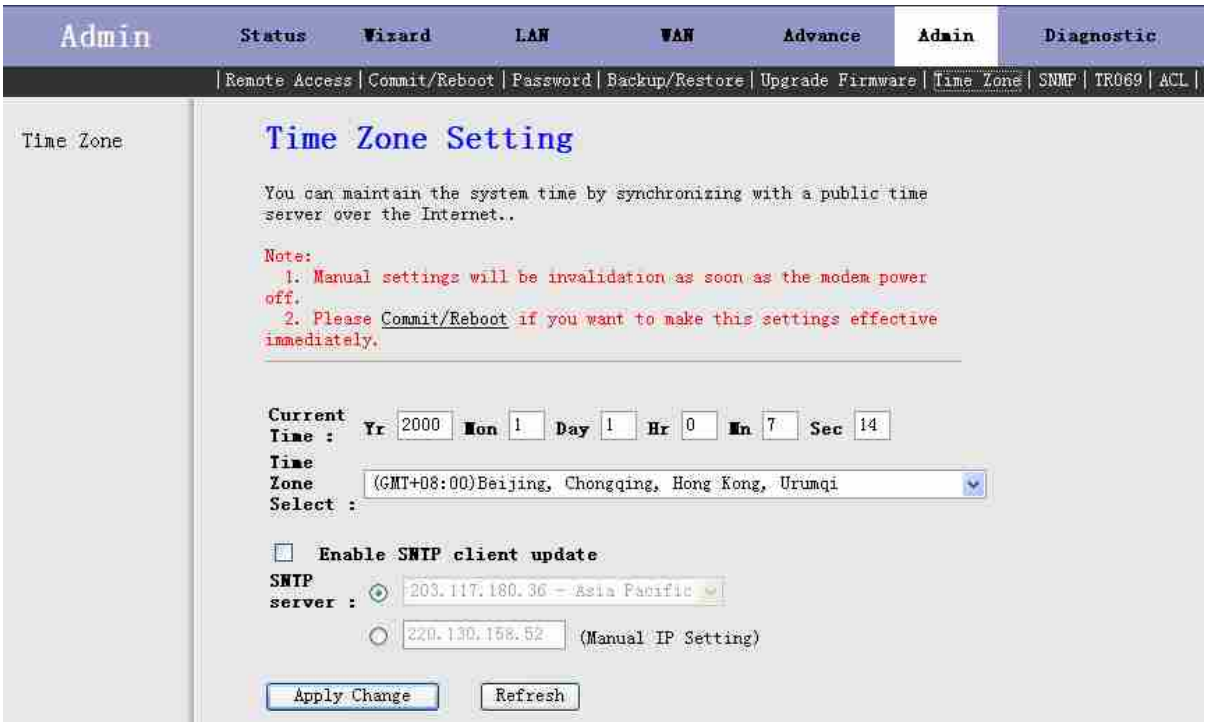
Admin
Status
Wizard
LAN
WAN
Advance
Admin
Diagnostic
Remote Access | Commit/Reboot | Password | Backup/Restore | Upgrade Firmware | Time Zone | SNMP | TR069 | ACL
Time Zone
Time Zone Setting
You can maintain the system time by synchronizing with a public time server over the Internet..
Note:
1. Manual settings will be invalidation as soon as the modem power off.
2. Please Commit/Reboot if you want to make this settings effective immediately.
Current Time :
Yr 2000 Mon 1 Day 1 Hr 0 Mn 7 Sec 14
Time Zone Select :
(GMT+08:00)Beijing, Chongqing, Hong Kong, Urumqi
Enable SNTP client update
SNTP server :
203.117.180.36 - Asia Pacific
220.130.158.52
(Manual IP Setting)
Apply Change
Refresh

Fig 3.7.6

Label	Description
Refresh	Click this button to refresh the system shown in the page.
Time Mode	If select Time Server, the router will get the system time from the time server. If select Manual, you should configure the system time manually.
Enable SNTP Client Update	If select this checkbox, you can choose the correct SNTP Server which you want.
SNTP Server	Choose the SNTP Server here.
Time Zone	Select the Time Zone of in which area you are.
Apply Changes	Click this button to save the settings of this page.

3.7.7 SNMP

Click **SNMP** in the sub-menu to open the screen of Fig 3.7.7. In this page, you can set the SNMP parameters.

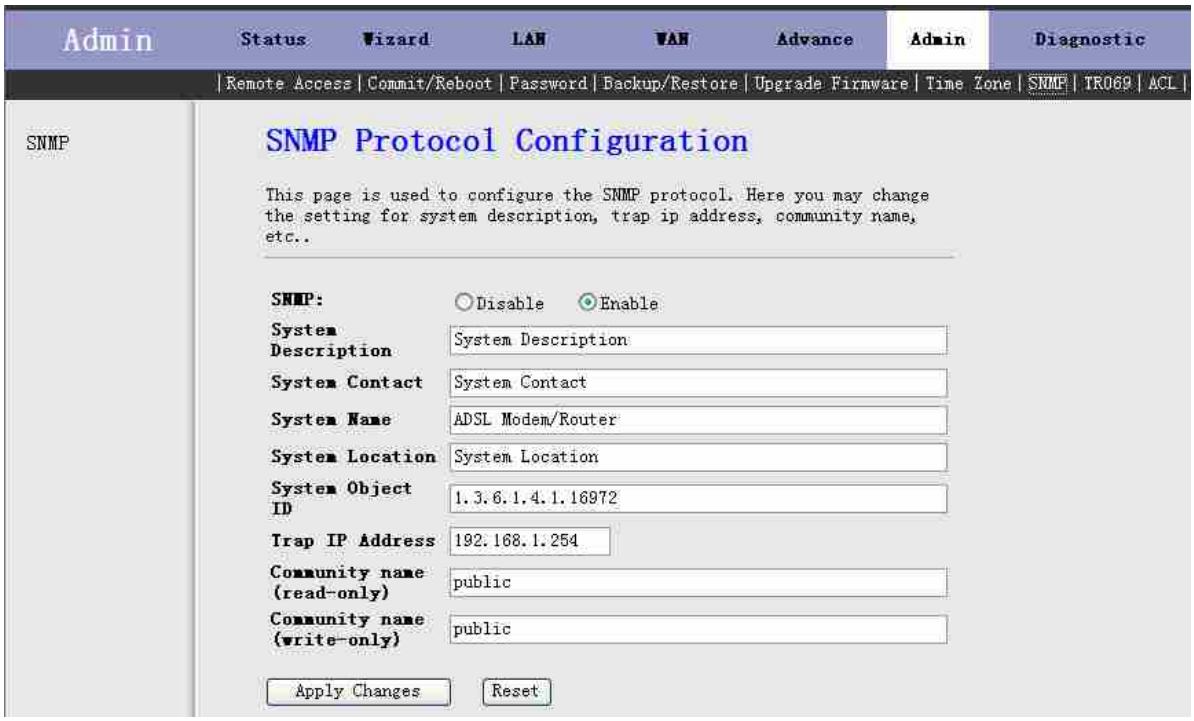

Fig 3.7.7

Label	Description
Trap IP Address	Input the Trap Host's IP here. The trap information will be sent to this host.
Community name(read-only)	The network administrators must use this password to read the information of this router.
Community name(write-only)	The network administrators must use this password to configure the information of this router.
Apply Changes	Click this button to save the settings of this page.
Reset	Click this button to begin configuring this screen afresh.

3.7.8 TR069

Click **TR069** in the sub-menu to open the screen of Fig 3.7.8. In this page, you can configure the TR-069 CPE.

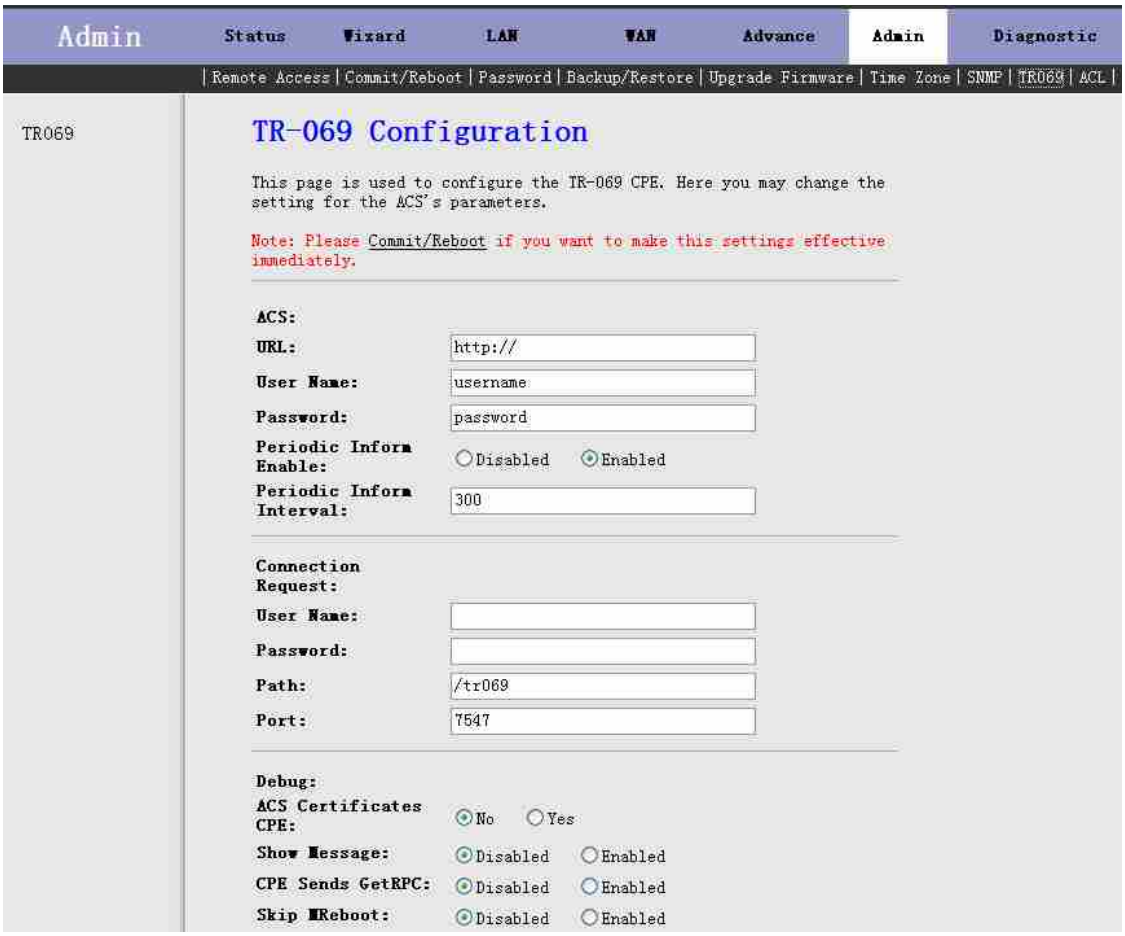

Fig 3.7.8

3.7.9 ACL

Click **ACL** in the sub-menu to open the screen of Fig 3.7.9. In this page, you can configure the IP Address for Access Control List. If ACL enabled, only the effective IP in ACL can access ADSL Router.

Step 1: If you want to enable ACL, please choose "Enable" then press "Apply Changes";

Step 2: Config Access Control List;

Note: If you check "Enable" in ACL Capability, please make sure that your host IP is in ACL List before it takes effect

Fig 3.7.9

3.8 Diagnostic

Click **Diagnostic** in the menu to open the sub-menu which contains 4 items: **Ping**, **ATM Loopback**, **ADSL** and **Diagnostic.**

3.8.1 Ping

Click **Ping** in the sub-menu to open the screen of Fig 3.8.1.

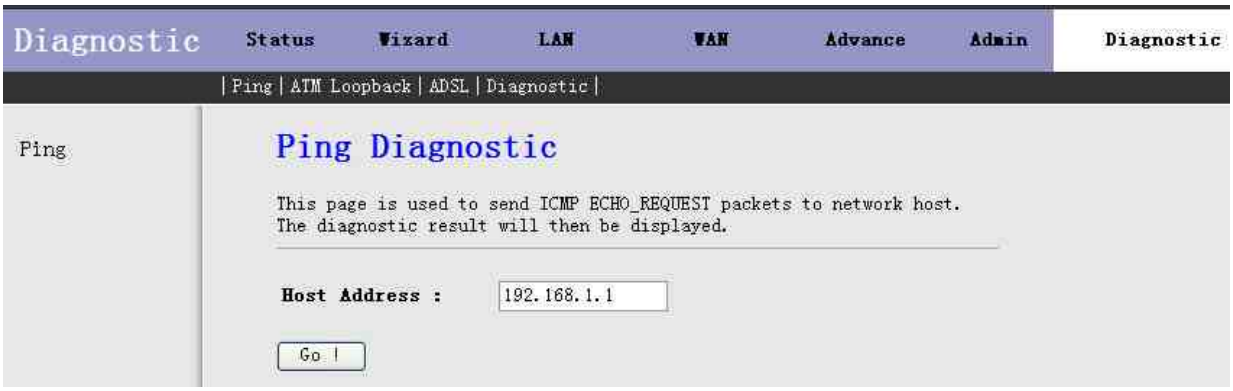

Fig 3.8.1

Label	Description
Host Address	Enter the IP Address here.
Go!	Click this button to begin to Ping the **Host Address**.

3.8.2 ATM Loopback

Click **ATM Loopback** in the sub-menu to open the screen of Fig 3.8.2. In this page, you can use VCC loopback function to check the connectivity of the VCC.

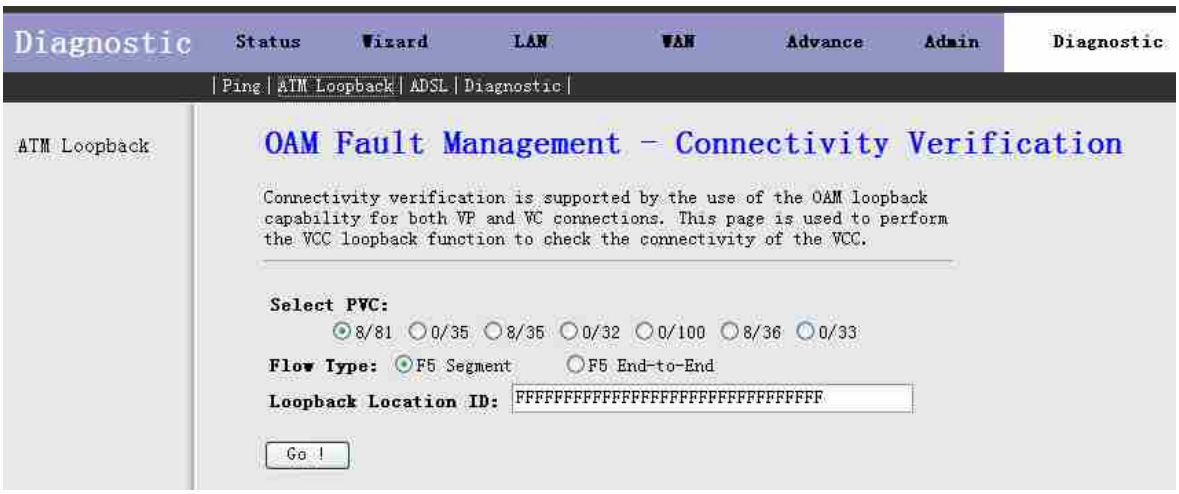
Diagnostic
Status
Wizard
LAN
WAN
Advance
Admin
Diagnostic
| Ping | ATM Loopback | ADSL | Diagnostic |
ATM Loopback
OAM Fault Management - Connectivity Verification
Connectivity verification is supported by the use of the OAM loopback capability for both VP and VC connections. This page is used to perform the VCC loopback function to check the connectivity of the VCC.
Select PVC:
8/81 0/35 8/35 0/32 0/100 8/36 0/33
Flow Type: F5 Segment F5 End-to-End
Loopback Location ID: FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
Go !

Fig 3.8.2

Go!：Click this button to begin testing.

3.8.3 ADSL

Click **ADSL** in the sub-menu to open the screen of Fig 3.8.3. This page is used for ADSL Tone Diagnostics.

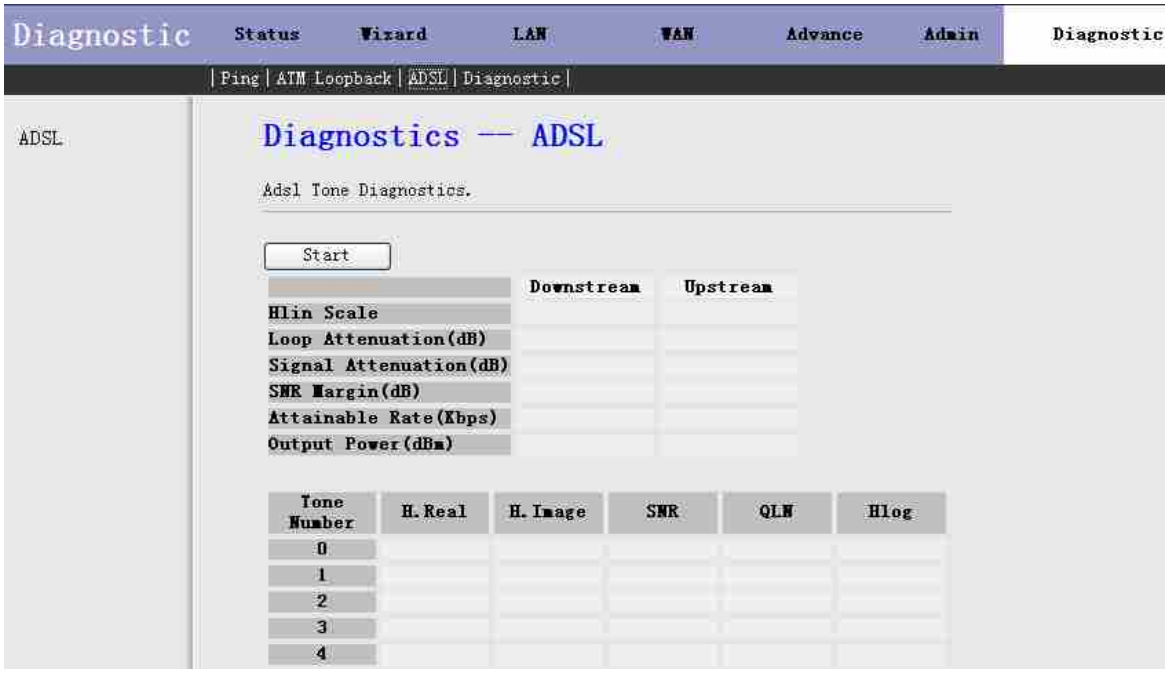

Fig 3.8.3

Start：Click this button to begin ADSL Tone Diagnostics.

3.8.4 Diagnostic

Click **Diagnostic** in the sub-menu to open the screen of Fig 3.8.4. This page is used for testing your DSL connection.

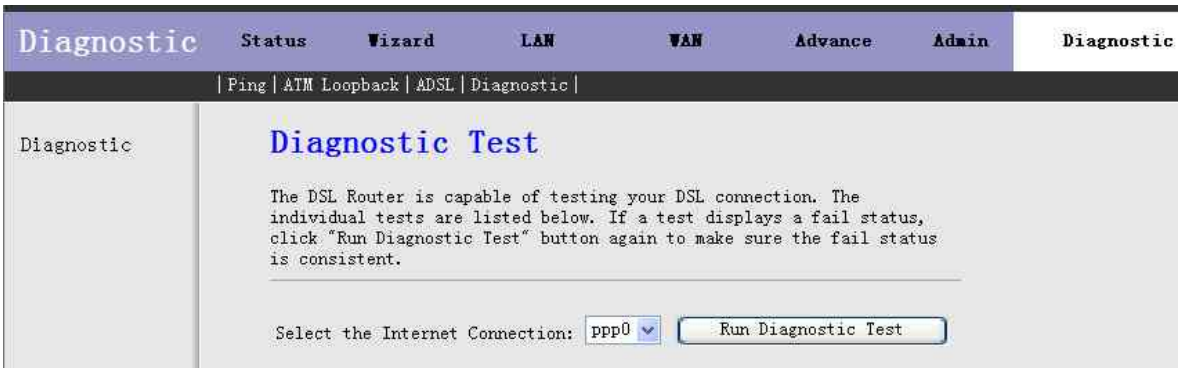
Diagnostic
Status
Wizard
LAN
WAN
Advance
Admin
Diagnostic
| Ping | ATM Loopback | ADSL | Diagnostic |
Diagnostic
Diagnostic Test
The DSL Router is capable of testing your DSL connection. The individual tests are listed below. If a test displays a fail status, click "Run Diagnostic Test" button again to make sure the fail status is consistent.
Select the Internet Connection: ppp0
Run Diagnostic Test

Fig 3.8.4

Run Diagnostic Test：Click this button to begin testing.

APPENDIX A: Abbreviation

ADSL **Asymmetric Digital Subscriber Line**

ATM **Asynchronous Transfer Mode**

ATU C **ATU at the central office end (i.e., network operator)**

ATU R **ATU at the remote terminal end (i.e., CP)**

BER **Bit Error Ratio**

CO **Central office**

CPE **Customer Premises Equipment**

CRC **Cyclic Redundancy Check**

DC **Direct Current**

DSL **Digital Subscriber Line**

HEC **Header Error Control**

IDFT **Inverse Discrete Fourier Transform**

LOF **Loss-of-frame defect**

LOS **Loss-of-signal defect**

MIB **Management Information Base**

Modem (MOdulator, DEModulator)

NMS Network Management System

OAM Operations, Administration and Maintenance

POTS Plain old telephone service; one of the services using the voiceband; sometimes used as a descriptor for all voiceband services

PSTN Public Switched Telephone Network

PVC Persist Virtual Circuit

QAM Quadrature Amplitude Modulation

SNR Signal to Noise Ratio

TP Twisted Pair

VPN Virtual Private Network